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from your president

Hospitality was the keynote during the recent Annual Meeting of A.S.D.C. in Los Angeles. We are most grateful to the Southern California Unit for being perfect hosts.

William E. Brown, the immediate past President, has done a masterful job of organization work for A.S.D.C. and those of us who have assumed leadership are most grateful for this legacy.

In the past, the Society has worked diligently to advance knowledge of all phases of dentistry for children to the profession. Now we must accept the challenge of educating the public in all phases of dentistry for children.

Your delegates, upon the recommendation of the officers, have voted an increase in the national dues. This increase in dues has made possible the appointment of a number of special committees to initiate a program of public relations and to strengthen the relationships with the State Units.

Our interest in dentistry for children demands that we develop a program that will increase both the membership and prestige of A.S.D.C.

The officers join me in wishing each of you joys of the Season and unlimited happiness during the New Year.

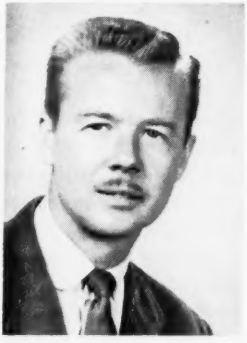
JAMES H. SIMMONS

New Executive Council Members

Irving Eichenbaum is a graduate of the University of Maryland Dental School, 1939. After 3 years in private practice and 4 years with the U. S. Air Force, he entered the field of pedodontics in New Britain, Connecticut, where he shares offices with his beautiful wife Naomi, also a pedodontist.

Irv is a Diplomate of the American Board of Pedodontics, a Fellow of the American College of Dentists, has held the office of President of the Conn. State Dental Association, is active in affairs of the American Dental Association and has written for many scientific dental journals.

He brings to our Executive Council a background of organizational experience, accomplishment and ability to work with people to get things done. Welcome, Irv!



Richard Jennings is a graduate of Indiana University School of Dentistry, from whence he received his D.D.S. and M.S.D. degrees. After a 2-year stint with the U. S. Naval Reserve, he established a part-time practice in 1947 in Speedway, Indiana and began teaching at his Alma Mater. In 1960 he left Indiana for Houston, Texas, where he assumed the Chairmanship of the Pedodontic Division of the University of Texas Dental Branch.

Dick is a Diplomate of the American Academy of Pedodontics, has held all the offices of the Indiana Society of Dentistry for Children and has authored many scientific articles in recognized dental journals. He has worked diligently on A.S.D.C. committees, and presently is preparing a brochure for prospective members.

We welcome Dick Jennings to our Executive Council and are sure you'll be hearing from him soon!

Mode Perry, Chairman of our 1960 Annual Meeting, is a graduate of the University of California School of Dentistry—1949. His pre-dental degree is from U.C.L.A., where, incidentally, he was a star athlete on the track team. Mode practiced and taught pedodontics at U.S.C. from 1949-53, and in 1956 moved to San Diego. He has held all offices of the So. California Society of Dentistry for Children, committee appointments in A.S.D.C., published articles on dental health and been chairman of the Speakers Bureau of the L.A. County Dental Society.

Mode is an indefatigible worker, good organizer and speaker, from whom we of the Executive Council expect much, as we welcome him to our official family.

The Development of the Permanent Teeth

CARMEN M. NOLLA, B.S., D.D.S., M.S.*

IT is important to every dentist treating children to have a good understanding of the development of the dentition. In order to widen one's thinking about the impingement of development on dental problems and perhaps improve one's clinical judgment, a comprehensive study of the development of the teeth should be most helpful.

In the study of child growth and development, it has been pointed out by various investigators that the development of the dentition has a close correlation to some other measures of growth. In the Laboratory School of the University of Michigan, the nature of growth and development has been investigated by serial examination of the same children at yearly intervals, utilizing a set of objective measurements of various physical and mental attributes. It has been found by Olson and Hughes[16, 17, 18, 19] that there is an intimate relationship in the functioning of all the aspects of normal growth, as has been shown by the plotting of a number of measurements in the same graph. When this relationship is appreciated, one thinks of the development of the teeth, not as an isolated process, but as one which relates to other developmental processes.

So far, the only available measure of dental age has been secured by noting the eruption of teeth (Cattell).[5] Although the eruption of the teeth may differ greatly in the time of appearance in the mouth of different children, the majority of the children exhibit some pattern in the sequence of eruption (Klein and Cody)[9] (Lo and Moyers).[13] However, a consideration of eruption alone makes one cognizant of only one phase of the development of the dentition. A measure of calcification (maturation) at different age-levels will provide a more precise index for determining dental age and will contribute to the concept of the organism as a whole.

In 1939, Pinney[21] completed a study of the development of the mandibular teeth, in which he utilized a technic for a serial study of radiographs of the same individual. It became apparent that a similar study should be conducted in order to obtain information about all of the teeth. Therefore, an investigation was started, using Pinney's technic, with some modifications. It seemed logical to conduct such a radiographic study of the development of the dentition, since radiographs are used extensively in dental diagnosis and clinical practice. Furthermore, by means of serial radiographs one can obtain continuous data on the changes exhibited by the individual being studied.

Many investigators have studied the development of the dentition by employing different methods of observation. These investigators should be recognized for their contributions because they have facilitated further research. However, one still finds principles in the literature that have not been explained satisfactorily and some misinterpretation of information. A review of the literature on the development of the dentition shows

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that the technics and methods used by Legros and Magitot,[11, 12] Black,[1, 2] Pierce,[20] Colyer,[7] Broomell and Fichelis,[4] Brady,[3] Schour and Massler,[22, 23, 24, 25] Logan and Kronfeld,[10, 14] and McCall[14, 23] are inconclusive from the point of view of serial growth and development of the individual as a whole. The method most frequently used by these investigators has been the anatomic, histologic or radiographic study of autopsied material. These methods of study have a number of limitations. For instance, with anatomic or microscopic sections it is impossible to study the continuity of growth in the same individual. According to Todd,[26] "A dead child is a defective child in whom there has occurred an interruption or prohibition of developmental growth sometime before death, unless death is due to an acute disease or an accident, such as injury or burns. The interpretive study of actual skulls must be tempered by recognition of this fact. If we are to investigate healthy skulls, we must do it on the living." The limitation of the radiographic study is that the developmental changes which occur prior to calcification are not observed radiographically. On the other hand, a study of serial radiographs of the same individual provides a good method for the longitudinal study of growth.

This investigation, now to be reported, was formulated in accord with the following objectives:

1. To organize a technic for the detailed appraisal of the development of the permanent dentition as revealed by radiographs;

2. To construct norms (tables and graphs) which will display the average development of individual teeth, both for boys and girls;

3. To prepare tables of development of permanent teeth which will permit the interpretation of individual differences in dental growth, by the age-unit method;

4. To gain information relative to the amount and kind of variation displayed by the growth of the permanent teeth;

5. To contribute to the understanding of differences in dental development of boys and girls;

6. To reconstruct previous evidence, with its errors in sampling and the omissions, into a theoretical set of developmental norms for permanent teeth from beginning to completion;

7. To make recommendations for further study in terms of progress made by the current study.

It would appear that the information derived would aid the dentist to assess and pace the development of a young person's dentition. Hence, a meaningful concept of normality, involving an individual growing child, might be secured.

Materials

The materials used for this study consisted of serial oral radiographs of twenty-five boys and twenty-five girls obtained from the files of the Child Development Laboratories of the University of Michigan School. Each set of radiographs included:

1. Extra-oral right and left lateral jaws,

2. Intra-oral maxillary and mandibular occlusals,

3. Intra-oral right and left maxillary periapicals of posterior teeth.

These radiographs were exposed and processed by the technicians in the Department of Radiography of the School of Dentistry, University of Michigan. Usually, a set of radiographs was secured

for each year of the record at a time approximating the individual's birthday. The total number of radiographs for the girls was 1746 and for the boys 1656.

The range in age of the group studied is shown in Table I.

TABLE I
RANGE IN AGE

Sex	Beginning Age in Months	Average	Terminal Age in Months	Average
Girls	25- 80	55.3	141-279	198.2
Boys	41-121	68.3	163-277	201.8

Method

The radiographic records were selected from the files on the basis of length. Not all of the long series were used. The radiographs were placed on a special view table which permitted accurate reading of details. The observation took cognizance only of the degree of development, as outlined in Figure I, which is a set of drawings illustrating the ten stages of development of the teeth as observed radiographically. The first column (right) appraises the growth-stage of the central and lateral incisor, the second the cuspid, the third the bicuspids, and the fourth the molars. The drawings illustrate for each of the ten stages (1 to 10 inclusive) the appearance of the stage of dental development observed radiographically.

Although both right and left sides

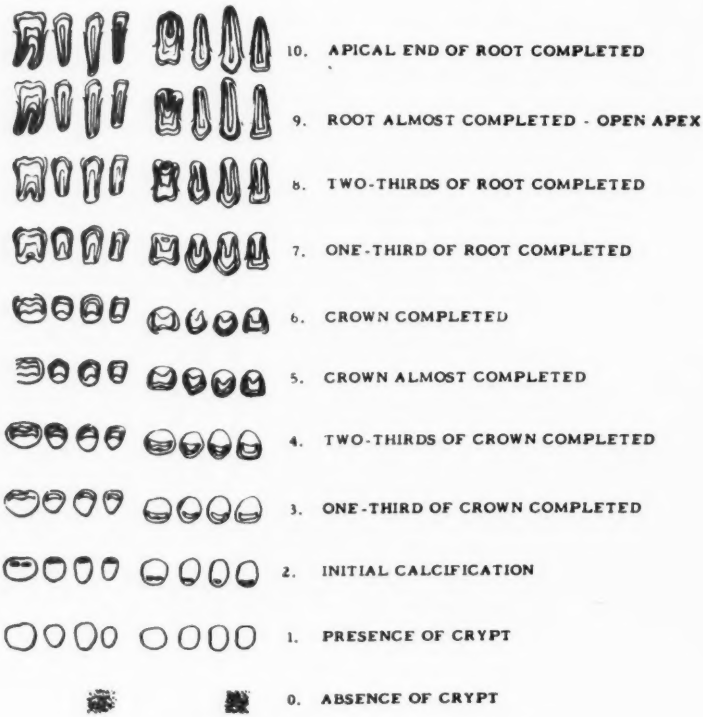
10. APICAL END OF ROOT COMPLETED
9. ROOT ALMOST COMPLETED - OPEN APEX
8. TWO-THIRDS OF ROOT COMPLETED
7. ONE-THIRD OF ROOT COMPLETED
6. CROWN COMPLETED
5. CROWN ALMOST COMPLETED
4. TWO-THIRDS OF CROWN COMPLETED
3. ONE-THIRD OF CROWN COMPLETED
2. INITIAL CALCIFICATION
1. PRESENCE OF CRYPT
0. ABSENCE OF CRYPT

Figure 1. Stages of development of mandibular and maxillary teeth.

were observed and studied, it was found that the rate of growth was approximately the same in both sides. This finding is in agreement with Pinney's experience in his earlier investigation. As a rule, it can be said that the values for one side are representative of the development of the teeth of the maxilla and the mandible. In all of the radiographs studied the observations were controlled by repeating the observation a second time.

In order to obtain an appraisal of the development of a particular tooth, the radiograph was matched as closely as possible with the comparative figure. For example, if one-third of the crown were completed the observation was given the value 3.0, if one-third of the root were completed the observation was graded 7.0. When the radiographic reading lay between two grades this appraisal was indicated as the value of 0.5. For example, if the reading of the radiograph were between one-third and two-thirds of the root completed it was given the value of 7.5. When the radiograph showed a reading that was slightly greater than the illustrated grade, but not as much as half way between that stage and the next, the value 0.2 was added. For example, if slightly more than two-thirds of the crown were completed if would become 4.2, or if somewhat more than one-third of the root were completed the grade would become 7.2. If the development were slightly less than the grade indicated the value 0.7 was added. For example, if two-thirds of the crown were approximately completed the grade would become 3.7, or if two-thirds of the root were almost completed the grade would become 7.7.

Thus, it is possible, without much difficulty, to assign the observational value, as seen, on the growth-level, above the growth-level, half-way between the growth-stage, and close to the next level. Attempts to appraise radiographs more accurately than this grading do not seem feasible.

A detailed description of the changes in developing teeth as observed radiographically now will be described. In determining the amount of maturation of developing teeth, the marginal appearance becomes the important consideration. The first radiographic sign of development is the appearance of an almost circular radiolucent structure in the bone which has been designated as the crypt. The radiolucent tooth-germ is enclosed within this crypt. Important cellular changes may have taken place prior to this stage, such as initiation, proliferation, histodifferentiation, morphodifferentiation and apposition.

The next change to be observed is the appearance of small radiopaque triangular points close to the inner coronal border of the crypt. In the succeeding annual radiographs, the quantiative increase in calcification easily is determined. The outline of the radiolucent pulp can be followed readily through the different stages of development. The completion of the apical end of the root

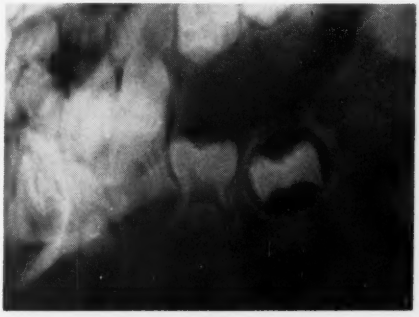

FIGURE 2. Radiograph showing the mandibular first permanent molar at stage 6 or the crown completed.

FIGURE 3. Radiograph showing the mandibular first permanent molar at stage 7 (one-third of the root completed), the second permanent molar and second bicuspid at stage 3.5 (more than one-third of crown completed), and the first bicuspid at stage 4.5 (more than two-thirds of the crown completed).

is the final stage to be observed radiographically in the process of maturation.

Figures 2 to 6 are radiographs which serve as examples of the different stages of growth.

In recording the degree of development of the individual teeth, special graphs were designed for the mandibular and maxillary teeth. On the vertical axis the stage of growth is represented by the drawings and on the horizontal axis the chronological age in months is represented. The readings, as plotted, and the curves obtained show the development for each individual tooth. Figure 7 shows the graphs of the mandibular and maxillary teeth of one of the girls studied.

FIGURE 4. Radiograph showing the mandibular first permanent molar at stage 7 (one-third of the root completed), the second bicuspid at stage 2 (beginning maturation), and the second permanent molar at stage 2.5 (less than one-third of crown completed).

FIGURE 5. Radiograph showing the mandibular first permanent molar at stage 10 (root completed), the second permanent molar and second bicuspid at stage 8 (two-thirds of root completed) and the third molar at stage 4 (two-thirds of the crown completed).

FIGURE 6. Radiographs showing the maxillary permanent cuspid at stage 7 (one-third of the root completed), the permanent lateral incisor at stage 8 (two-thirds of root completed) and the central incisor at stage 9 (apical end still wide).

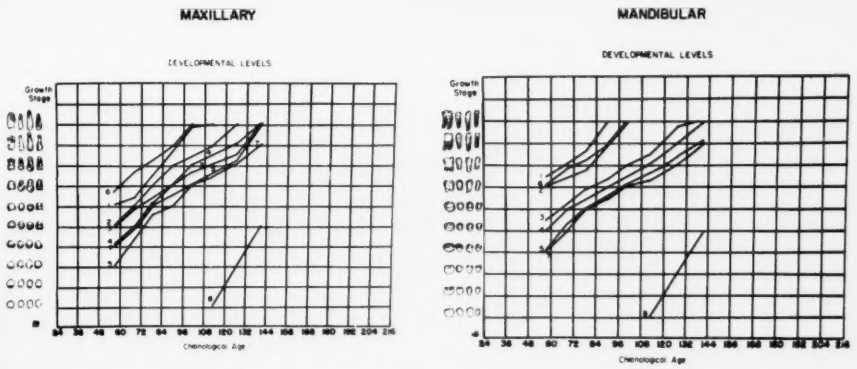

FIGURE 7. Graph showing developmental curves for the maxillary and mandibular teeth of case G67.

DENTAL AGE

The observation-points were recorded graphically in terms of degree of development in the ordinate and chronological age in the abscissa. These points were connected by lines providing a dental developmental curve. In order to tabulate the data for the developmental norms of dental age, the developmental curves were read back at the year-points

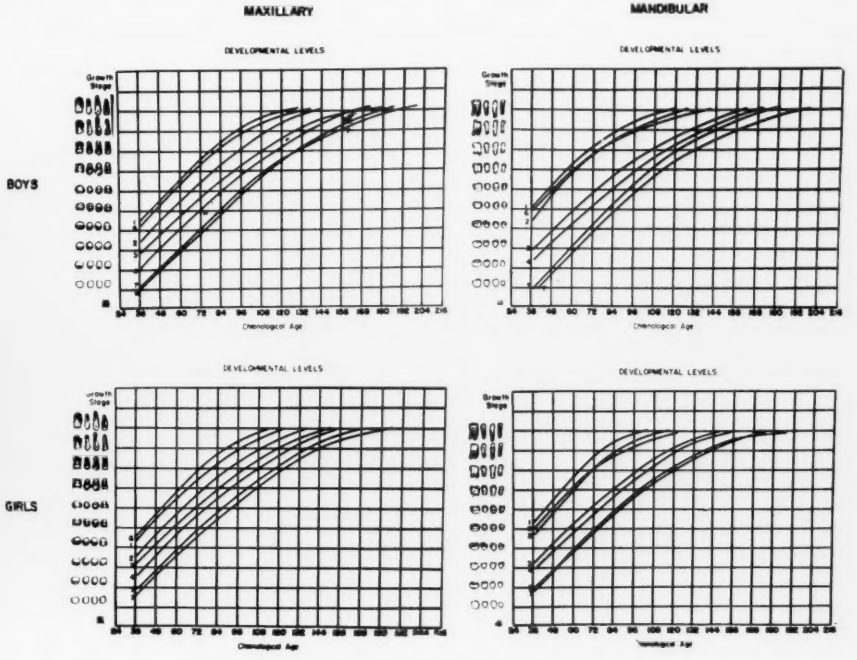

FIGURE 8. Norm-developmental curves for boys and girls.

in chronological age so that the developmental value, given for tabulation, is the intercept of the curve with successive abscissa at the year-points. It is obvious that the tabulated values permit the assumption that the progress in the development of the tooth is a linear function from the two actual points of observation and technically may be termed interpolation, with occasional short periods of extrapolation. These values were averaged at the year points of boys and girls, both for maxillary and mandibular teeth. These averages, as described, provide a general average of all teeth, a dental age as a whole.

Results and Discussion

Norm-developmental curves for each tooth and dental-age values, both for boys and girls, were obtained. Figure 8 shows the norm-developmental curves for maxillary and mandibular teeth of the boys and of the girls. The interpretation of these curves reveals that the general type of growth displayed by each tooth was the same and that the equation which expresses the general type of change in rate is an algebraic quadratic ($y = ax^2 + bx + c$). Few developmental differences were shown between right and left teeth of the same kind. No significant differences in sex were observed in the time required for development, however, the girls started dental development at an earlier age and finished development earlier. With few exceptions, differences for the sexes in the general sequence of the completion of development of each tooth were not apparent. The roots of the mandibular teeth were completed in the following order:

1. Central incisor
2. Lateral incisor and first permanent molar

TABLE II

NORMS FOR THE MATURATION OF PERMANENT TEETH FOR BOYS

Age	*Mandibular Teeth (Growth Stage)*								*Maxillary Teeth (Growth Stage)*							
(Yrs.)	1|1	2|2	3|3	4|4	5|5	6|6	7|7	8|8	1|1	2|2	3|3	4|4	5|5	6|6	7|7	8|8
3	5.2	4.5	3.2	2.6	1.1	5.0	.7		4.3	3.4	3.0	2.0	1.0	4.2	1.0	
4	6.5	5.7	4.2	3.5	2.2	6.2	2.0		5.4	4.5	3.9	3.0	2.0	5.3	2.0	
5	7.5	6.8	5.1	4.4	3.3	7.0	3.0		6.4	5.5	4.8	4.0	3.0	6.4	3.0	
6	8.2	7.7	5.9	5.2	4.3	7.7	4.0		7.3	6.4	5.6	4.9	4.0	7.4	4.0	
7	8.8	8.5	6.7	6.0	5.3	8.4	5.0	.8	8.2	7.2	6.3	5.7	4.9	8.2	5.0	
8	9.3	9.1	7.4	6.8	6.2	9.0	5.9	1.4	8.8	8.0	7.0	6.5	5.8	8.9	5.8	1.0
9	9.7	9.5	8.0	7.5	7.0	9.5	6.7	1.8	9.4	8.7	7.7	7.2	6.6	9.4	6.5	1.8
10	10.0	9.8	8.6	8.2	7.7	9.8	7.4	2.0	9.7	9.3	8.4	7.9	7.3	9.7	7.2	2.3
11			9.1	8.8	8.3	9.9	7.9	2.7	9.95	9.7	8.8	8.6	8.0	9.8	7.8	3.0
12			9.6	9.4	8.9		8.4	3.5		9.95	9.2	9.2	8.7		8.3	4.
13			9.8	9.7	9.4		8.9	4.5			9.6	9.6	9.3		8.8	4.9
14				10.0	9.7		9.3	5.3			9.8	9.8	9.6		9.3	5.9
15					10.0		9.7	6.2			9.9	9.9	9.9		9.6	6.6
16½							10.0	7.3							10.0	7.7
17								7.6								8.0

TABLE III

NORMS FOR THE MATURATION OF PERMANENT TEETH FOR GIRLS

Age	*Mandibular Teeth (Growth Stage)*								*Maxillary Teeth (Growth Stage)*							
(Yrs.)	1|1	2|2	3|3	4|4	5|5	6|6	7|7	8|8	1|1	2|2	3|3	4|4	5|5	6|6	7|7	8|8
3	5.3	4.7	3.4	2.9	1.7	5.0	1.6		4.3	3.7	3.3	2.6	2.0	4.5	1.8	
4	6.6	6.0	4.4	3.9	2.8	6.2	2.8		5.4	4.8	4.3	3.6	3.0	5.7	2.8	
5	7.6	7.2	5.4	4.9	3.8	7.3	3.9		6.5	5.8	5.3	4.6	4.0	6.9	3.8	
6	8.5	8.1	6.3	5.8	4.8	8.1	5.0		7.4	6.7	6.2	5.6	4.9	7.9	4.7	
7	9.3	8.9	7.2	6.7	5.7	8.7	5.9	1.8	8.3	7.6	7.0	6.5	5.8	8.7	5.6	
8	9.8	9.5	8.0	7.5	6.6	9.3	6.7	2.1	9.0	8.4	7.8	7.3	6.6	9.3	6.5	2.1
9	10.0	9.9	8.7	8.3	7.4	9.7	7.4	2.3	9.6	9.1	8.5	8.1	7.4	9.7	7.2	2.4
10		10.0	9.2	8.9	8.1	10.0	8.1	3.2	10.0	9.6	9.1	8.7	8.1	10.0	7.9	3.2
11			9.7	9.4	8.6		8.6	3.7		10.0	9.5	9.3	8.7		8.5	4.3
12			10.0	9.7	9.1		9.1	4.7			9.8	9.7	9.3		9.0	5.4
13				10.0	9.4		9.5	5.8			10.0	10.0	9.7		9.5	6.2
14					9.7		9.7	6.5					10.0		9.7	6.8
15					10.0		9.8	6.9							9.8	7.3
16							10.0	7.5							10.0	8.0
17								8.0								8.7

3. Cuspid
4. First bicuspid
5. Second bicuspid
6. Second permanent molar
7. Third molar

The roots of the maxillary teeth were completed in the following order:

1. Central and first permanent molar
2. Lateral incisor
3. First bicuspid and cuspid
4. Second bicuspid
5. Second permanent molar
6. Third molar

The importance of obtaining norm-developmental curves is that one can show actual and average development. This procedure enables the dentist to see the extent to which the variability of the individual adheres or departs from the average. Thus, individual differences of clinical significance are revealed.

The norm-developmental values at the year-points, both for boys and girls are reported in Tables II and III, respectively. In order to obtain a dental age for all of the teeth as a group, the values for the maxillary and mandibular teeth were added at the year points and Tables IV[1] and V[1] resulted. Tables IV and V[1] show the age-norm for maxillary and mandibular teeth combined. The statistical summary has permitted the preparation of dental-age scales which facilitate the clinical application of the results.

In order to obtain a dental age in terms of tooth development it is necessary to know how much each tooth has developed at a series of levels. This information is secured by examining the radiographs, utilizing the technic which has been described previously. (See Fig. 1.) The developmental value obtained

TABLE IV

AGE NORMS FOR MAXILLARY AND MANDIBULAR TEETH OF GIRLS (EXCLUDING THIRD MOLARS)

Age in Years	*Sum of Stages for 7 Mandibular Teeth*	*Sum of Stages for 7 Maxillary Teeth*	*Sum of Stages for 14 Maxillary and Mandibular Teeth*
3	24.6	22.2	46.8
4	32.7	29.6	62.3
5	40.1	37.9	78.0
6	46.6	43.4	90.0
7	52.4	49.5	101.9
8	57.4	54.9	112.3
9	58.4	59.6	118.0
10	64.3	63.4	127.7
11	66.3	64.0	130.3
12	67.9	67.8	135.7
13	68.9	69.2	138.1
14	69.4	69.7	139.1
15	69.8	69.8	139.6
16	70.0	70.0	140.0
17	70.0	70.0	140.0

for each tooth (maxillary and mandibular) is added. This sum is matched with the table for the translation of the developmental value into the dental age. (See Table IV-V[1]). For example, a girl has a value of 112.0 for the sum of the maxillary and the mandibular teeth, excluding the third molars. Referring to Table IV, which shows the age-equivalents for the growth of maxillary and mandibular teeth, this table indicates a dental age of 96 months (8 years). Suppose she were 7½ years old chronologically, then she will be plus six months in tooth development. Hence, the extent to which the individual displays greater than average, average and lower than average development can be determined.

TABLE IV[1]

AGE NORMS FOR MAXILLARY AND MANDIBULAR TEETH OF GIRLS (INCLUDING THIRD MOLARS)

Age in Years	*Sum of Stages for 8 Mandibular Teeth*	*Sum of Stages for 8 Maxillary Teeth*	*Sum of 16 Maxillary and Mandibular Teeth*
7	54.2	49.5	103.7
8	59.5	57.0	116.5
9	66.7	62.0	122.7
10	67.5	66.6	134.1
11	70.0	68.3	138.3
12	72.6	73.2	145.7
13	74.7	75.4	150.1
14	75.9	76.5	152.4
15	76.7	77.1	153.8
16	77.5	78.0	155.5
17	78.0	78.7	156.7

TABLE V

AGE NORMS FOR MAXILLARY AND MANDIBULAR TEETH OF BOYS (EXCLUDING THIRD MOLARS)

Age in Years	*Sum of Stages for 7 Mandibular Teeth*	*Sum of Stages for 7 Maxillary Teeth*	*Sum of Stages for 14 Maxillary and Mandibular Teeth*
3	22.3	18.9	41.2
4	30.3	26.1	56.4
5	37.1	33.1	70.2
6	43.0	39.6	82.6
7	48.7	45.5	94.2
8	53.7	50.8	104.5
9	57.9	55.5	113.3
10	61.5	59.5	121.0
11	64.0	62.6	126.6
12	66.3	65.3	131.6
13	67.8	67.3	135.1
14	69.0	68.5	137.5
15	69.7	69.3	139.0
16	70.0	70.0	140.0
17	70.0	70.0	140.0

The difference between the actual and the average shows the amount of variability which is displayed, a variability which is called the individuality of growth in tooth development. For this reason one should avoid thinking of the dental age-equivalent as a rigid norm or standard. However, this method assists one in understanding why any given child is making a greater than average, average, and less than average in tooth development. In a graphical form, Figure 9 shows the dental-age curves for both maxillary and mandibular teeth combined, excluding the third molars. The broken line shows the dental-age curve of the girls and the solid line represents the dental-age curve for the boys.

TABLE V[1]

AGE NORMS FOR MAXILLARY AND MANDIBULAR TEETH OF BOYS (INCLUDING THIRD MOLARS)

Age in Years	*Sum of Stages for 8 Mandibular Teeth*	*Sum of Stages for 8 Maxillary Teeth*	*Sum of 16 Maxillary and Mandibular Teeth*
7	49.5	45.5	95.0
8	55.1	51.8	106.9
9	59.7	57.3	117.0
10	63.5	61.8	125.3
11	66.7	65.6	132.3
12	69.8	69.3	139.1
13	72.3	72.2	144.5
14	74.3	74.4	148.7
15	75.9	75.9	151.8
16	77.3	77.7	155.0
17	77.6	78.0	155.6

The lower extension of the curves has been predicted only. Again, one can see from this curve that no significant differences for sex in the time required for development are apparent, since the curves are of the same nature.

The technic which has been described provides a new understanding of the individuality of change with time and of individual differences among children at a given time. The graph designed for the compilation of the developmental curves for each tooth shows, at a glance, the stage of development of the dentition as a unit, as well as the growth of individual teeth.

The information about the development of teeth is important, not only for reasons of diagnosis and treatment, but also for more detailed purposes of research. Calcification of teeth may, in this way, be used as a criterion of dental age and of the physiologic age of a patient. It provides an index of physiologic maturity of the permanent dentition. Knowledge about general acceleration or retardation of calcification of the teeth of an individual is important to the orthodontist who wishes to determine time of treatment on the basis of the physiologic age of the patient.

Finally, it has been possible to prepare a table of the average ages for the completion of each tooth for boys and

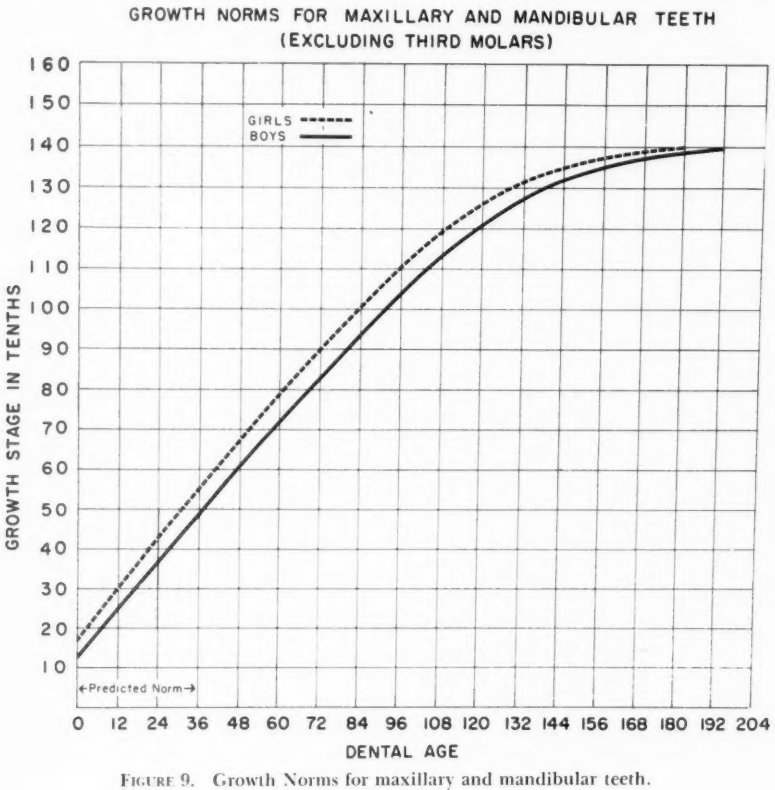

FIGURE 9. Growth Norms for maxillary and mandibular teeth.

TABLE VI

AGES FOR COMPLETION OF CALCIFICATION OF PERMANENT TEETH

Teeth Mand.	*Crown Completed (Nolla[16])*		*Root Completed (Nolla[16])*		*Logan and Kronfeld[31] (Modified by Schour and Massler[22]) Root Completed*
	Boys	*Girls*	*Boys*	*Girls*	
1 1	3 yrs. 8 mo.	3 yrs. 6 mo.	10 yrs.	8 yrs. 6 mo.	9 yrs.
2 2	4 yrs. 4 mo.	4 yrs.	10 yrs. 6 mo.	9 yrs. 8 mo.	10 yrs.
3 3	6 yrs.	5 yrs. 8 mo.	13 yrs. 6 mo.	12 yrs.	12-14 yrs.
4 4	7 yrs.	6 yrs. 6 mo.	14 yrs.	12 yrs. 6 mo.	12-13 yrs.
5 5	7 yrs. 8 mo.	7 yrs. 2 mo.	15 yrs.	14 yrs. 6 mo.	13-14 yrs.
6 6	4 yrs.	3 yrs. 10 mo.	11 yrs. 6 mo.	10 yrs.	9-10 yrs.
7 7	8 yrs. 2 mo.	7 yrs.	16 yrs. 6 mo.	15 yrs. 6 mo.	14-15 yrs.
Max.					
1 1	4½ yrs.	4½ yrs.	11 yrs.	10 yrs.	10 yrs.
2 2	5½ yrs.	5 yrs. 2 mo.	12 yrs.	11 yrs.	11 yrs.
3 3	6½ yrs.	5 yrs. 10 mo.	15 yrs.	12½ to 13 yrs.	13-15 yrs.
4 4	7 yrs. 4 mo.	6 yrs. 4 mo.	14½ yrs.	12 yrs. 9 mo.	12-13 yrs.
5 5	8 yrs. 5 mo.	7 yrs. 3 mo.	15½ yrs.	14 yrs.	13-14 yrs.
6 6	4½ yrs.	4 yrs. 2 mo.	11½ yrs.	9½ yrs.	9-10 yrs.
7 7	8 yrs. 2 mo.	7 yrs. 6 mo.	16½ yrs.	15 yrs. 6 mo.	14-16 yrs.

girls. Table VI shows the average age at which each tooth is completed. It has become apparent from this study that the process of eruption should be investigated, in order to determine the stages of calcification in the teeth at which eruption begins.

Summary

Serial annual radiographs of 25 boys (total radiographs = 1656) and of 25 girls (total radiographs = 1746) obtained from the files of the University of Michigan Child Development Laboratories were studied in order to develop an accurate procedure for the detailed appraisal of the development of the permanent dentition, as revealed by radiographs. The development of each tooth was appraised by studying the radiographs which were graded on a scale from 0 to 10. Each set of observational appraisals was summarized individually, both graphically and numerically, and provided material to show the dental development of each person and numerical values for the tabulation of dental-age scales.

Few developmental differences were found between right and left teeth of the same kind. No significant differences in the rate of development were observed in males and females, however, the girls started dental development earlier and finished earlier. The general type of growth displayed by each tooth was the same. The statistical summary of individual tooth development has permitted the preparation of detailed growth-age scales which facilitate clinical application of the results.

Conclusions

1. The type of growth displayed by each tooth is the same.

2. No significant differences in the

rates of development were observed in males and females.

3. On the average, differences in the general sequence of development were not apparent between the sexes.

4. Few development differences were shown between right and left teeth of the same kind.

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Sodium Fluoride Mouthwash—Can It Help?*

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IN a previous study, toothbrushing was conceded a role, even though it was not a major one, in preventing carious lesions when a 0.25 per cent solution of sodium fluoride was used as a mouthwash.[1] The purpose of this current report is to determine (1) the part that anticariogenic practices play, when used in conjunction with the 0.25 per cent solution of sodium fluoride as a mouthwash, in reducing the counts of lactobacilli to negative or immune levels, (2) the length of time necessary for the mouthwash to reduce the counts to the desired levels and (3) whether the commercially available medicated dentifrices assist or abate the effect of the fluoride-mouthwash. The anticariogenic practices studied were toothbrushing,[2] use of a tetradecylamine oil,[3-7] elimination of sweets between meals, and utilization of a restrictive diet.

Method

An appraisal was made of 6,600 salivary tests of aproximately 330 children in the writer's pedodontic practice, ages two to 12, who experienced rampant dental caries with high counts of lactobacilli. Children were excluded who were immune or free of caries or experienced low counts of lactobacilli.[1] Of these 330 children, 124 were selected for study. The selection was made after ensuring the absence of all variable factors which could either increase or decrease the count of lactobacilli. Only those records were studied which indicated definitely that the resultant count of lactobacilli could be produced by the contributing measure in question. Some of the influential measures which were utilized to screen out the patients were excessive or unusual exposure to sweets on such occasions as holidays or birthday parties while others were the daily use of sweet liquid medicaments and vitamins,[1] sickness with symptomatic loss of appetite, and the use of oral and parenteral antibiotics.[1] The decisive counts of lactobacilli were obtained from salivary samples secured the first thing in the morning and they consisted of an average of three samples secured under identical conditions. All samples were cultured and counted by the Dental Caries Research Laboratory of The University of Michigan.

Results

When a bland toothpowder was substituted for a commercial dentifrice, without instruction in toothbrushing (Table I), and the sample secured immediately after the use of the powder, the count was reduced to low levels in the mouths of 46 of the 124 children—36 to a range of negative to 4,000 and 10 to the level of 4,000 to 8,000. The counts of 78 children did not respond to brushing with this toothpowder.

Fifty of these 78 nonresponsive children (Table II) did lower their counts to the level of immunes when, without instruction in toothbrushing, the 0.25 per cent of sodium fluoride was used as a mouthwash after the teeth were brushed with any nonmedicated dentifrice and rinsed from the mouth. Three

* Presented at the 13th Annual Meeting of the American Academy of Pedodontics, Boulder, Colorado, August 31, 1960.

TABLE I
EFFECT OF TOOTHBRUSHING

Decisive Counts of Lactobacilli	*Initial Counts of Lactobacilli*					*Sub Total*	*Total*
	NEGATIVE TO 4,000	4,000 TO 8,000	10,000 TO 25,000	25,000 TO 50,000	50,000 PLUS		
Negative to 4,000			7	8	21	36	46
4,000 to 8,000			1	2	7	10	
10,000 to 25,000				3	18	21	78
25,000 to 50,000					15	15	
50,000 and over			1	2	39	42	

required the change from a paste to a powder in order to assist the mouthwash. Five needed the extra added aid of exclusion of sweets between meals. Six responded when the tetradecylamine medicinal oil was sealed in the fluoride. Nine reduced the count of latobacilli only when placed on a restricted noncariogenic diet in conjunction with the daily use of the mouthwash. The remaining five failed completely to respond. It can be seen that the individual responses varied to such an extent that the promiscuous prescription of the mouthwash alone may not gain the maximum benefit for all patients. It can be assumed, therefore, that the mouthwash may need some assistance from either careful toothbrushing, minimization of sweets, elimination of cariogenic foods, or the use of a tetradecylamine oil in order to lower the counts of lactobacilli

TABLE II
NUMBER OF CHILDREN WHO RESPONDED
WHEN MOUTHWASH WAS INCORPORATED

Failures With Toothbrushing	*Mouthwash*					
	ALONE	NO SWEETS BETWEEN MEALS	AMINE	TOOTH-POWDER	RESTRICTED DIET	FAILURES
78	50	5	6	3	9	5

for the maximum number of children.

Table III presents the number of months of continuous use of the mouthwash found necessary to reduce the counts of lactobacilli to immune-levels. Twenty-two patients required one or two months. Since three samples were required to assess the value of the mouthwash and since each sample was obtained after a two-week interval, it appears proper to conclude that these children were responding within one month. Fifty, however, did require three or more months.

TABLE III

THE NUMBER OF MONTHS REQUIRED WITH THE MOUTHWASH TO LOWER THE COUNTS OF LACTOBACILLI TO LEVELS OF IMMUNITY

	Months						
	1	2	3	4	5	6	7-12
Number	2	20	23	6	10	3	8

In the study of the commercially medicated dentifrices incorporating ammonia, chlorophyll, hexachloraphene, antienzymes, or stannous fluoride, it was found that none consistently lowered the counts of lactobacilli of children in the study. It must be remembered that these children were experiencing rampant caries, along with high counts of lactobacilli, and were using some of the dentifrices before the study was undertaken. The saliva samples were secured immediately after the use of the dentifrices and before any attempt was made to carry out the current study. The count was lowered by the use of the mouthwash alone or in combination with other factors. After ensuring that the analysis was accurate and was followed, then any desired dentifrice could be used. Samples of saliva were secured immediately after the use of these medicated dentifrices, followed by the use of the mouthwash of 0.25 per cent solution of sodium fluoride. These samples showed a consistent increase in the counts of lactobacilli. Unlike Muhler's findings,[20] the stannous-fluoride dentifrice did not appear to enhance the sodium fluoride but seemed to act like a nonmedicated dentifrice. There have been some reports in which the stannous fluoride behaved in the manner of other medicated dentifrices. When these medicated dentifrices were discontinued, the counts of lactobacilli remained and maintained at the low level under the prescribed conditions.

Discussion

It can be assumed that toothbrushing did play a role but not a major role. This study showed that toothbrushing could lower the counts of lactobacilli and that the mouthwash may require additional assistance, such as toothbrushing, minimization of sweets between meals, restrictive diet, or the use of the medicinal oil. It has been shown, hence, that it would be improper to treat every patient by the prescription of a mouthwash of fluoride alone.

All factors must be taken in consideration. The systematic series of salivary tests will determine whether the less demanding oral hygenic practice, or the utilization of a mouthwash containing sodium fluoride accompanied by toothbrushing is sufficient, or whether the additional use of the medicinal oil, or the minimization or elimination of cariogenic foods, or the combination of all methods should become the daily regimen.

No effort was made to obtain percentages for the number of individuals who

were affected by each of the anticariogenic procedures discussed. Many of the 330 children who were not selected for this study may have received some benefits from an anticariogenic practice, but because of the existence of a questionable variable these children could not be included. A statement of individual percentages, hence, would be unreliable.

The majority of children requiring three or more months of use, twice daily, of the mouthwash containing sodium fluoride suggests that it took that length of time to alter the enamel either by the formation of a fluorapatite, a coating of calcium fluoride,[23] or by an uptake of a fluoride.[8] It may be that the bathing of the teeth twice daily with the mouthwash containing the sodium fluoride required many months to deplete the unfavorable elements from the internal or the surface-enamel and then to reach a point of saturated equilibrium so that the mouthwash could replace conveniently or replenish the daily loss of the acquired favorable elements.[9-11] This possibility may explain why a more frequent application of the fluoride topically now is being recommended.[12-14]

Brudevold and others[9] have shown a 56 per cent loss of fluoride from topically treated teeth following three minutes of toothbrushing with water. Scheinin[21] demonstrated an increase in solubility of fluoridated enamel after prolonged washing. Myers and others[22] have shown a 90 per cent loss of fluoride following rinsing. This same group demonstrated, when enamel saturated by fluoride was immersed in radioactive F^{18}, that the enamel exchanged fluoride, yet there was no greater amount of fluoride in the enamel than before the immersion. This finding suggests that there may be a point of equilibrium in saturation for specific enamel.[24] Since there can be an exchange of the fluorides even though the tooth is fully saturated, it is reasonable to assume that the tooth is more likely to acquire additional fluoride after depletion by the attrition of brushing, of food, or of rinsing.[19, 22, 25]

Since it took three or more months of using a 0.25 per cent solution of sodium fluoride as a mouthwash twice daily to maintain a low count of lactobacilli, possibly the application topically of an eight to 10 per cent solution of sodium fluoride as a "booster" would help to obtain, earlier, an equilibrium of fluoride-saturated enamel. Muhler[20] showed a greater reduction of carious lesions by the single application of stannous fluoride and the unsupervised use of a dentifrice of stannous fluoride compared with the dentifrice of stannous fluoride used alone or combined with the topical application of distilled water. The method of application of Klinkenberg and Bibby,[26] rather than that of Knutson[27] appears to be the better choice. After this "booster," the equilibrium of the fluoride within the enamel then could be maintained by the bath, twice daily, of the 0.25 per cent solution of sodium fluoride as a mouthwash. When children return for their periodical examination every three or four months, another "booster" should be completed for an extra margin of insurance. The number of "boosters" can be reduced gradually as the patient gets older and may be discontinued in his early twenties, but the daily use of the mouthwash must be continued for the remainder of the patient's life in order to maintain the proper level of fluoride within the enamel.

It has been revealed that the commercially medicated dentifrices were inef-

fective in reducing the counts of lactobacilli, but this finding may not indicate that they were ineffective. It does indicate that the nonmedicated and commercially medicated dentifrice used in this study without any supplemental help, such as the mouthwash, were ineffective in the treatment of rampant caries or mouths experiencing high counts of lactobacilli. Possibly they can be of some benefit when the counts are low. With the exception of the stannous fluoride, all available medicated dentifrices appeared to impede the action of the mouthwash containing sodium fluoride. Keys' study revealed, clinically, a tendency toward an increase in dental caries when a caries-inhibitory dentifrice was used in combination with sodium fluoride. Speculation on how and in what manner this impeding results, would only lead to conjecture and invite justifiable criticism. It does suggest that their continued use may reduce the beneficial effectiveness of the fluoridated communal water on posteruptive teeth.[15, 19, 24, 25]

Summary

It has been shown in this report that the individual's requirements vary so much that the 0.25 per cent solution of sodium fluoride as a mouthwash may need assistance from an additional regimen—toothbrushing, elimination of sweets between meals, ingestion of a noncariogenic diet, or the use of a tetradecylamine medicinal oil in order to be effective in reducing high counts of lactobacilli and maintaining a low count. It has been observed that the commercially medicated dentifrices are ineffective in reducing the counts accompanying rampant caries and that high counts in most instances (except with stannous fluoride) hinder the progress of the mouthwash containing sodium fluoride; that it takes three months or more of use of the mouthwash, twice daily, to achieve and maintain a low level of salivary lactobacilli.

A "booster" application topically of an eight to 10 per cent solution of sodium fluoride was suggested to reduce the time required and, when periodically applied, to maintain the proper equilibrium of enamel and fluoride even though the mouthwash must be used continuously for the remainder of the patient's life.

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Summary

It has been shown in this report that the individual's requirements vary so much that the 0.25 per cent solution of sodium fluoride as a mouthwash may need assistance from an additional regimen—toothbrushing, elimination of sweets between meals, ingestion of a noncariogenic diet, or the use of a tetradecylamine medicinal oil in order to be effective in reducing high counts of lactobacilli and maintaining a low count. It has been observed that the commercially medicated dentifrices are ineffective in reducing the counts accompanying rampant caries and that high counts in most instances (except with stannous fluoride) hinder the progress of the mouthwash containing sodium fluoride; that it takes three months or more of use of the mouthwash, twice daily, to achieve and maintain a low level of salivary lactobacilli.

A "booster" application topically of an eight to 10 per cent solution of sodium fluoride was suggested to reduce the time required and, when periodically applied, to maintain the proper equilibrium of enamel and fluoride even though the mouthwash must be used continuously for the remainder of the patient's life.

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The Occurrence of Caries in the Adjacent Surfaces Of Second Primary and First Permanent Molars

KURT A. ROSENZWEIG, D.M.D., M.P.H., AND HORTENSE KLEIN, D.M.D.*

EDITOR'S NOTE:

The two short papers presented herewith are among the first to emanate from the new Hadassah School of Dentistry in Jerusalem, Israel. Doctors Rosenzweig and Klein are, respectively, Head and Chief Dentist of the Department of Preventive Dentistry, which comprises pedodontics, orthodontics and dental public health. The Department was organized with the cooperation of our good friend Maury Massler, of the School of Dentistry at the University of Illinois, who spent six months in 1960 at the new school, on a Fulbright grant.

We wish the greatest of success to our Israeli friends, and welcome their contributions to our JOURNAL.

A. E. S.

INTRODUCTION

IT is generally accepted by dentists that caries of the mesial or distal surface on any tooth will sooner or later cause "contact caries" in the opposite surface of the adjacent tooth. It appears, however, that this common clinical impression so far has not been supported by unequivocal evidence. Finn[1] resumed the studies which had been conducted on this subject as follows: "The evidence indicates that caries can occur on only one or two adjoining surfaces but suggests that caries on both adjacent surfaces is more common than on only one surface." In order to establish how often both possibilities are apt to occur the present study was designed.

MATERIAL AND METHODS

In Israel there exist in many cities school dental clinics where treatment is performed by methods in use in a number of countries in Europe:[2] All permanent teeth are filled as soon as decay is diagnosed, whereas primary teeth are mostly left untreated as long as they do not actually cause pain or overt inflammation. In the latter case they are extracted. One hundred sixty-six children of both sexes, born in 1949, 1950 and 1951 respectively and living in the Jerusalem suburb Kiryath Hayovel were examined in March 1960, using mouth mirror and explorer. Caries experience was registered in terms of DMF and def for first permanent and first and second primary molars only, but decay or fillings on the distal surface of the second primary and on the mesial surface of the first permanent molars were specially charted.

FINDINGS

1. Caries Experience. A trend of rising caries experience in the permanent and decreasing def rate in the primary teeth is recognizable. The yearly incidence of carious permanent teeth is low (table 1).

2. Approximal Caries. Of 664 first permanent molars, in seven the mesial surface was affected by caries, six of these being associated with carious or filled

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distal surface of the adjacent primary molars; only one had an entirely intact primary neighbor. In addition 82 second primary molars were found missing, but since it was impossible to decide whether they were exfoliated or extracted as a consequence of caries, and moreover nothing was known about the site of a possible carious lesion, these teeth were not included in the evalution of the data (table 2). The occurrence of caries on the mesial surface of the first permanent molar with caries on the opposite surface of the second primary molar, tested by means of Yule's coefficient of association,[3] was found highly significant (Q = .97).

Discussion

It appears from the present observations that practically every carious lesion on the mesial surface of a first permanent molar was associated with caries on the adjacent surface of the primary tooth. There were, however, many more primary molars showing distal caries without the adjacent surface being attacked, which would show that if a causal connection is assumed that in order to be attacked by caries on the mesial surface the first permanent molar has to have a distally affected neighbour, but that this condition only relatively seldom is conducive to decay of the six year molar. These findings are contrary to Finn's above mentioned conclusions. There are, however, several circumstances which have to be considered: 1. The time in which the first permanent molar is at risk to be possibly "infected" by its primary neighbour may be relatively short. 2. Caries susceptibility of children in Israel is low,[4] and in other populations more mesial surfaces may be affected. 3. Not all approximal tooth surfaces may be of the same caries resistance. In order to be able to evaluate correctly these and other factors it would be advisable to conduct a study, preferably longitudinal, on a larger sample of

TABLE 1

CARIES EXPERIENCE IN FIRST PERMANENT (MEAN DMFT) AND FIRST AND SECOND PRIMARY (MEAN def)

Year of Birth	*Children's Age*	*Number Examined*	*DMF (1st Perm. Molars)*	*def (1st & 2nd Prim. Molars)*
1951	9 Years	62	1.04	5.25
1950	10 Years	62	1.17	4.35
1949	11 Years	42	1.73	3.09

TABLE 2

APPROXIMAL CARIES IN SECOND PRIMARY AND FIRST PERMANENT MOLARS

First Perm. Molar	*Second Primary Molar*		*Total*
	WITH DIST. CARIES	WITHOUT DIST. CAR.	
With mes. caries	6	1	7
Without mes. caries	45	530	575
Total	51	531	582

children, testing their individual caries activity at the time of examination.

Summary and Conclusions

One hundred sixty-six children, 9 to 11 years of age, were examined clinically as to the occurrence of caries on the distal surface of the second primary molar with or without caries on the mesial surface of the first permanent molar. Six out of seven affected permanent molars had adjacent carious surfaces, but 45 additional distally carious second primary molars had intact permanent neighbours.

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Loss of Space by Extraction of Primary Molars

Kurt A. Rosenzweig, D.M.D., M.P.H., and Hortense Klein, D.M.D.

Introduction

It has long been recognized that premature loss of primary teeth especially of the primary molars, is apt to impair the normal development of the jaws by lack of function, and the adjacent teeth may drift into the empty space.[1] Both processes lead to narrowing of the space which is to be occupied by the tooth succeeding the extracted primary tooth and thus constitute one of the major causes of the development of malocclusion. Since in most programs for dental treatment of school children in Israel as well as in many European countries filling of primary teeth is not included, a great number of these teeth are extracted. The system as a whole and the reasons for its acceptance have been discussed elsewhere,[2] and recently a study has been conducted in one of the suburbs of Jerusalem in order to assess what possible damage could result from this neglect of the primary teeth.

Material and Methods

One hundred sixty-six school children, 9 to 11 years of age, of both sexes, constituting the whole third, fourth and fifth grade of a school were included in the study. All these children had been under supervision and if necessary, treated in the school dental clinic for the last three years according to the aforementioned system. As a result not a single permanent tooth had been lost, but a considerable number of primary teeth were lost. Where this had happened the space was measured between the embrasures of the adjacent teeth, and the same distance was registered for the opposite side, where the respective tooth was still present and thus served as control. Sixty-one matched pairs consisting of one previously extracted and one present primary molar were available for comparison; no case was included where the succedaneous premolar had already erupted. Since in most cases no records on the extraction of the primary teeth existed the time factor was not taken in consideration.

Findings

It was found that premature loss of primary molars caused loss of space in all categories, the difference between extraction and control side being statistic-

COMPARISON OF SPACE ON EXTRACTION AND CONTROL SIDE (IN MM)

Type of Tooth	*No. of Pairs*	*Average Space*		*Difference*
		Extraction Side	*Control Side*	
D / D	13	5.6 ± 1.9	6.9 ± 2.2	1.3
$\overline{D / D}$	19	5.9 ± 2.1	7.6 ± 5.9	1.7
E / E	12	5.3 ± 3.1	8.3 ± 2.6	3.0
$\overline{E / E}$	17	6.2 ± 2.2	9.2 ± 2.4	2.0

ally significant for both upper and lower second primary molars. No evaluation of loss of space during a given time was possible since the period between extraction and examination was unknown.

Discussion

The findings of the present investigation are in agreement with most reports on premature loss of primary teeth which have been summarized by Brauer.[3] Although since extraction only a comparatively short time could have elapsed, in all but eight of the 61 cases loss of space was observed, ranging between 0.5 mm to complete closure (8 mm). In the frame of this study it was impossible to assess the respective importance of tooth drifting and lack of development of the jaws, neither was it possible to find out whether loss of space occurs at different rates for different types of teeth. Longitudinal studies would be necessary to answer these and other pertinent questions.

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Oral Conditions of the Mentally Retarded Patient*

KENNETH A. TANNENBAUM, D.D.S., AND JEROLD W. MILLER, D.D.S.

INTRODUCTION

DOWN through the years much is to be found in the dental literature concerning the mentally retarded and emotionally disturbed patient. At first there was an attempt to show the casual relationship of infected or impacted teeth to mental disturbances.[7, 9] In the eighteenth century schizophrenia was thought to be caused by the tardy appearance of the teeth. Cotton[2] believed that schizophrenia was caused by such entities as pyorrhea, periodontitis, periapical granuloma, devitalized teeth, poorly filled teeth, extensive caries, and unerupted or impacted teeth. Magri[8] concluded that dentomaxillofacial characteristics in mongolism included an unusually thick tongue, a high palate, and small teeth. Album[1] states that, "Mentally retarded children . . . have severe malocclusion." Raison et al. found that ". . . tooth eruption usually is retarded and irregular, and agnesia in the dental arch is common." Champion[4] found that the palatal dimensions of the mentally retarded were the same as those of the normal. Recently the literature has dealt with the problem of treating patients with mental conditions.

This paper will deal with another aspect of retardation and dentistry. It will attempt to determine whether there is any correlation between mental retardation and such oral conditions as caries frequency, gingival disturbances, and developmental anomalies.

BACKGROUND

The Devereux School in Devon, Pennsylvania, provided the subject material for this experiment. This is an exclusive private institution for both the mentally retarded and emotionally disturbed.

The medical files and other facilities at Devereux were made available to us at the Greenlea unit, a unit of 190 persons located in West Chester, Pennsylvania. This unit included the most severely mentally retarded at Devereux.

A group of 38 children ranging in age from 12-22 years with an average of 15.9 years was selected. Their medical histories showed them to be badly retarded with organic brain damage or severe systemic disturbances before age six. The average I.Q. of our test group was 55.3 with a range of 24-100. Some of the children had been at Devereux for as long as 15 years with the average length of stay 6.1 years. This particular age group was selected so as to avoid the variable of the primary dentition.

Devereux children are seen regularly by local dentists. In addition some are under the care of orthodontists. The children have access to tooth brushes and paste, and they are encouraged to use them often.

In addition to the test group, a comparison group of 20 subjects was chosen. This group was composed of children in the same age range, but with emotional disturbances and no organic brain

* Presented while the authors were Senior Students at the School of Dentistry, University of Pennsylvania, and adjudged winner of the A.S.D.C. Award presented by the Pennsylvania Unit at Bedford Springs, June 1960.

damage. The subjects for comparison were ten boys and ten girls having an average age of 16 years. Their average I.Q. was 101, and they had been at the school for an average of two years. This group was used to set up a comparison between our findings on the retarded and on the "normal," even though we realize that the comparison group was not strictly normal in the sense of the word.

Procedure

A worksheet was prepared which enabled us to record the name, age, I.Q., home address, father's occupation, arrival at school, and many dental and facial characteristics, including the number of teeth present, carious lesions, wear facets, arch relationships, condition of the oral tissues, anomalies, and a medical history.

The examination of each child was performed in a room of the medical staff at the school. The child sat in a straight chair facing the examiner, and was examined for a period of about ten minutes. Background music was provided to relax the children.

All examinations were done by one researcher using magnifying mirrors, explorers, and tongue blades. The other person recorded the findings. Each child was given a toothbrush after his examination, and some were given instruction for its proper usage.

Results

The average mouth in the test group had 3.5 restorations and 2.5 carious lesions (as determined by clinical examination). The DMF (tooth) rate of this group was 11.4. In the same categories the comparison group had 8.5 restorations and 1.0 carious lesion and the DMF (tooth) rate was 13.5.

Wear facets were present in 12 retarded individuals (32%) and in one disturbed person (5%). Seventeen of the retarded had an overbite (average 4.4 mm.), twenty-one had an anterior overjet relationship (average 5.5 mm.), and four cases of crossbite were seen. Fifteen cases of overbite (average 2.4 mm.), 18 cases of overjet (average 2.7 mm.), and three crossbite cases were seen in the emotionally disturbed group.

Diastemata were observed in 14 cases (34%) of the test group between the maxillary permanent central incisors. This compares to three cases in the comparison group (15%).

Slight crowding of the mandibular anterior teeth was seen in six retarded and three disturbed persons; moderate crowding was seen in two of the retarded; marked crowding was seen in three retarded and two disturbed individuals.

Three cases of bilaterally missing maxillary lateral incisors were present in the retarded persons. There were 13 cases of missing second pre-molars (either upper, or lower, or both), and eight cases of retained primary molars (as determined by clinical examination). In comparison there were two cases of missing second premolars in the comparison group. One patient had all four absent.

Enamel hypoplasia was observed in two cases (5%) of the test group and in one case (5%) of the comparison group.

Twenty-two of the 38 mentally retarded (58%) brushed their teeth at least twice a day. Twenty-one (55%) were seen to have calculus deposits, and twenty-eight (74%) had either an acute or chronic gingivitis. (Two of these were attributed to Sodium Dilantin therapy.)

Of the 38 test patients seen, nine had ovoid arch form, 10 parabolic, 10 trape-

zoidal, and nine were V-shaped. The vault of the palate was high in 12, medium in 15, and low in 11 cases. The rugae were enlarged in 11 cases. In the comparison group there were two ovoid, nine parabolic, two trapezoidal, and seven V-shaped dental arches. The palatal vaults were high in 11, medium in seven, and low in two cases. There were no instances of enlarged rugae.

Tongue thrust was observed in one of the mentally retarded. Also, six cases of macroglossia, one instance of crenation marking, and five cases of enlarged fungiform papillae were seen in this group. The only abnormal tongue findings in the comparison group were two cases of overgrown filiform papillae.

Two cheek biters were found in the test group, and one in the comparison. Three cases of macrocheilia were seen in the former; one in the latter. Eight of the retarded said they were mouth breathers; 5 ground their teeth; 11 bit their fingernails; and three bit their lips. In addition, one case of herpetic stomatitis was diagnosed. One of the comparison group bit his nails.

Conclusions

Both test and comparison groups have received constant dental attention as seen by the low amount of caries present (2.5 per retarded person; 1.0 per disturbed person). The major difference in this category is that the retarded children have only 3.5 restorations on the average (total DF rate of 6.0) as compared to 8.5 (DF rate of 9.5) restorations in the comparison group. The lower caries incidence may be attributed, in part, to the fact that the retarded persons have been at Devereux four years longer on the average. The retarded, also, are much more concerned with the care of their teeth, some brushing them almost fanatically, five and six times a day. Nevertheless, despite these factors, it appears that in this research, caries is lower in the retarded child than in the "normal." Eight of the retarded had no caries or restorations.

Wear facets were found on the teeth of 12 of the test group (32%) as opposed to one of the comparison (5%). One may justifiably conclude, therefore, that the retarded have more nervous habits than the disturbed. This is further brought out by the incidence of fingernail and lip biting and tooth grinding in the test group.

A much greater occurrence of diastemata between the maxillary permanent central incisors was seen in the retarded (37%) than in the disturbed (15%). Coupled with a much larger average overbite relationship (4.4 mm., test group, as opposed to 2.4 mm., comparison) and overjet relationship (5.5 mm. as opposed to 2.7 mm.) it appears that there is an overgrowth of the maxilla associated with an undergrowth of the mandible in the mentally retarded.

Thirteen persons of the 38 mentally retarded examined clinically were missing one or more second premolars (34%). This compares to two cases found in the comparison group (10%). In addition, three of the retarded were found to be missing their permanent maxillary lateral incisors bilaterally as opposed to no instances of this in the comparison group. This large difference is significant, pointing out what seems to be a definite relationship of mental retardation, especially with organic brain damage, to a possible metabolism disturbance resulting in certain teeth missing from the arch. It is hoped that roentgenograms may be made of these indi-

viduals at a future date. Although impaction must be considered, it seems unlikely that the incidence would be so high.

Calculus deposits were found on 21 of the 38 retarded individuals (55%) and on only four of the 20 in the comparison group (20%). Also, gingivitis in varying degrees was seen in 28 of the test group (74%), and again in four of the comparison group (20%). Since both groups are on the same diet and are treated by the same dentists, the retarded seem to be more predisposed to both calculus and gingival disturbances. This may be due to their nervousness or their mental condition, but it is a significant finding nevertheless.

Summary

Clinical examinations were done on 38 mentally retarded and 20 emotionally disturbed patients at the Devereux School. Results of these examinations show differences between these groups with regard to caries, nervous habits, dental arches, missing teeth, and gingival disturbances.

We would like to thank Dr. Walter M. Uhler, Mr. Joseph Ferdinand, the nurses, and the secretaries of the Devereux School for their sincere interest and help.

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A SUMMARY OF SOME OF THE FINDINGS IN THE TEST AND CONTROL GROUPS

Condition	*No. of Cases Seen in 38 Retarded*	*Per Cent*	*No. of Cases Seen in 20 Disturbed*	*Per Cent*
Permanent teeth present	Av. 26.6		Av. 28	
Primary teeth present	Av. 0.9		Av. 0.0	
Permanent teeth missing	Av. 5.4		Av. 4.0	
No. of restorations	Av. 3.5		Av. 8.5	
No. of carious lesions	Av. 2.5		Av. 1.0	
Wear facets	12	32	1.0	5
Overbite	17		15	
Overjet	21		18	
Crossbite	4		3	
Diastema	14	37	3	15
Enamel hypoplasia	2	5	1	5
Calculus deposits	21	55	4	20
Gingivitis	28	74	4	20

A Dues Increase Means Progress

At the recent A.S.D.C. Annual Meeting in Los Angeles the national dues were raised from $5.00 to $10.00 a year by an overwhelming vote of the delegates. The Executive Council had studied the financial structure of A.S.D.C. for three years and concluded that a dues increase was mandatory if the Society was to grow further and fulfill its obligations to the public and the profession. Some of the reasons for this increase were enumerated in the 3rd Quarter issue of the JOURNAL. It was pointed out that the usual costs of running a large organization have increased markedly over the past ten years. The employment of an executive secretary two years ago and the subsequent expansion of this office have increased the cost of operations. The increased activities of committees, the increasing cost of the JOURNAL and annual meetings and the need for greater activity in the field of public relations were additional reasons for a dues increase.

What will the dues increase do for the constituent societies and for you, the individual member? Perhaps the greatest step forward will be in the area of public relations. A committee has been established to study various professional public relations agencies in order to select one which can best serve A.S.D.C. It is expected that such a project will help educate the public to the need for more and better dental care for children. In order to serve you more fully it will be necessary to expand the office of the executive secretary further. The need for a full-time person is imminent in addition to certain part-time personnel.

The Executive Council has long realized the need for closer ties with the state Units and the individual member. For this reason funds have been allocated for visits by officers to state Unit meetings on request of the Unit even to the extent of helping to secure speakers. Requests for this service can be made of the President. Additional funds have been set aside to launch an intensive membership campaign, particularly in the quest for new student members. It should be pointed out that the dues for student members remain at $2.00.

Clinical Acceptance of Stannous Fluoride Prophylaxis Paste

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Introduction

With the exception of the fluoridation of the municipal water supplies, probably the most effective caries preventive treatment at present is the topical application of fluorides to the teeth. The use of a 2% sodium fluoride topical application at four successive sittings, following a prophylaxis, has been accompanied by an approximate 40% reduction in caries incidence.[1] More recently, a one-application technic, using a stannous fluoride solution, has resulted in an approximate 57% reduction of caries for primary teeth,[2] and approximately 59% in the permanent dentition.[3] This increased effectiveness of stannous fluoride over sodium fluoride has also been seen in vitro research, in animal experimentation, and finally with an adult human population.[4]

Several controlled studies have demonstrated that the incorporation of a low concentration of stannous fluoride in a dentifrice has been correlated with a lower incidence of caries in children's groups.[5] This fact suggested the possibility that stannous fluoride could also be incorporated into a prophylaxis paste, thus insuring in a single step, a prophylaxis and a simultaneous topical application of an anticariogenic agent. Previous attempts to accomplish this objective with sodium fluoride resulted in conflicting results.[6, 7]

Recent experimentation at the School of Aviation Medicine, USAF, has been directed towards developing such a prophylaxis paste for use in the Air Force Preventive Dentistry Program. A stannous fluoride-silex-silicone prophylaxis paste was formulated that was chemically stable, and which in vitro protected extracted teeth to a much greater extent from acid decalcification than did a 10% topical application of SnF_2.[8] Preliminary clinical testing of this prototype paste demonstrated a relatively poor patient taste acceptance;[9] resultantly, formula modifications were made to eliminate this major objection.

The following paper is a report of the patient taste acceptance and abrasive characteristics of this revised paste formula when used with a 4 to 17 year age group. Average patient age was 10.2 years, and included 56 females and 42 males.

Method

The modified formula and instructions for mixing and use of the stannous fluoride-silex-silicone prophylaxis paste was as follows:

Formula

(School of Avn. Med., USAF, Paste Code X-5)

Solid Phase

Stannous Fluoride	100 grams
Silex, extra fine	300 grams
Sodium borate, extra fine	30 grams
Sucaryl	3.0 grams

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Liquid Phase

Silicone	20 ml
Liquid Petrolatum	80 ml
Oil of Peppermint	5 ml
Oil of Anise	5 ml

Required Materials and Sources

Non Standard Items:	*Unit*
	Approx. Cost
Stannous fluoride, 100%-40 mesh,	$3.00 per ½ lb.

Ozark Mahoning Co.
310 W. 6th Street
Tulsa, Okla.

Silex, extra fine	0.60/lb.

S. S. White Dental Mfg. Co.
211-217 S. 12th Street
Philadelphia 5, Pa.

Silicone, Dow Corning No. 555	6.00/pt.

Dow Corning
Midland, Michigan

Plastic Bottles (A wide-mouth plastic bottle with a tight sealing plastic cap will suffice) 8 oz. bottle	0.50 ea.

Dynalab Corporation
850 Clinton Ave., S.
P. O. Box 112
Rochester, New York

Directions for Compounding By Pharmacy Personnel

1. Mix solid ingredients in a large porcelain mortar.

a. Weigh out 30 grams of sodium borate and grind to a fine powder.

b. Add 300 grams of extra-fine silex, then 3.0 grams of previously ground sucaryl, and finally, 100 grams of stannous fluoride. Mix thoroughly.

2. Place 20 ml. of silicone in a 100 ml. graduate, and add liquid petrolatum to the 100 ml. mark.

3. Add liquid (step 2) to solid mix in mortar and thoroughly spatulate.

4. Add five ml. of oil of peppermint and five ml. of oil of anise, and again spatulate for approximately five minutes. The use of a slightly smaller mesh size of silex may necessitate an additional amount of the silicone-liquid petrolatum dilution (step 2).

5. Place equal amounts in 2 wide mouth, 8 ounce plastic bottles. Screw bottle top tightly.

6. It is desirable to have a separate supply of the silicone-petrolatum mix (step 2), in order to add a few drops (whenever needed) to maintain a slight overlay in the plastic container, or to moisten the contents of the dappen dish.

All paste used throughout the study was mixed and control tested by the Department of Dental Science, School of Aviation Medicine, USAF. Although it was recommended that no paste be used after two months from date of mixing, no loss in chemical stability was noted over the period of the study, as indicated by the continued in vitro protection of extracted teeth to acid decalcification.

Before using the paste for the simultaneous cleaning, polishing, and topical application procedure, the paste was stirred in the plastic container in order to work the liquid overlay into the solid phase. The desired amount of paste was then placed in a dappen dish, and any excess liquid absorbed by a gauze sponge to achieve desired consistency. This step insured a rather dry mix that could be better controlled in the mouth.

The most important steps contributing to the ultimate success or failure of the clinical trial were the application and rinsing technics practiced by the dentist or oral hygienist. The paste, because of the fluoride content, was carefully used, and was applied with a soft rubber cup

at a relatively slow speed. After each polishing interval, the mouth was well flushed with a stream of water from the water syringe, followed by a DOUBLE rinse from a cup by the patient.

Thorough stripping of the interproximal areas with the paste was necessary to insure the adequate application of stannous fluoride to these caries-vulnerable areas.

After the completion of the prophylaxis procedure, each patient was asked to indicate on a scale of ten (0-BAD, 10-GOOD), their subjective opinion of the taste acceptance of the paste. On the reverse side of the questionnaire, the operator accomplishing the prophylaxis similarly indicated on a similar scale of ten, his objective opinion of the patient's acceptance of the paste. Also, on a third scale, cleaning ability (abrasiveness) of the paste was rated.

The frequency distribution ratings in these three categories are indicated in Table 1.

TABLE 1

CLINICAL ACCEPTANCE OF STANNOUS FLUORIDE-SILEX-SILICONE PROPHYLAXIS PASTE

	Subjective TASTE REACTION	*Objective* PATIENT REACTION	*Operator* ABRASIVE RATING
0	4	1	0
1	7	1	0
2	8	4	0
3	9	4	0
4	7	11	0
5	15	10	0
6	12	12	5
7	13	17	50
8	9	21	35
9	9	4	8
10	5	14	0
Averages	4.72	5.66	6.65

Discussion

The stannous fluoride-silex-silicone prophylaxis paste developed for use in a military preventive dentistry program is acceptable for use with younger age groups. Clinical acceptance appears contingent on patient taste acceptance; with the most critical point in patient taste acceptance being the adequacy of the rinsing that follows each polishing phase. If adequate rinsing is accomplished, a rather pleasant flavor remains after use of the paste; otherwise, a lingering bitter flavor ensues if the patient swallows before such adequate rinsing.

The average patient's taste acceptance rating was 4.72; whereas, the average operator's objective rating of patient acceptance was higher, being 5.66. It was noted that taste ratings were slightly higher at the end of the study, compared to the beginning—probably due to an increased operator proficiency in application and rinsing.

This paste should not be used in cases exhibiting moderate-to-severe gingivitis —the same contraindication as applies to the topical application of a 10% solution of stannous fluoride. When blanching did occur, it was localized to the papillary and marginal gingiva. Again, as for taste acceptance, good rinsing technics are necessary to minimize the occurrence and extent of tissue blanching.

Staining of tooth structures was not a problem. A few cases of slight staining occurred in apparently hypocalcified areas, probably representing areas of incipient caries. Stannous fluoride does have the potentiality of staining the defective margins of silicate restorations. Non-marginal staining of silicates was not seen immediately, but it was noted in several instances at subsequent visits.

These stains were easily removed with an extra-fine cuttlefish strip. However, in anterior areas that exhibit an extensive number of silicate restorations, it might be prudent to avoid the use of this paste, or to advise the child's parents of the minor nature of the staining possibility compared to the major contribution to caries prevention. The fact that relatively few silicates are seen in the age group under consideration makes the possibility of staining no major problem.

Abrasiveness of the paste was satisfactory, exhibiting an average operator rating of 6.65. In the few cases where an excessive amount of stain was present, a preliminary polishing was accomplished with the regular pumice paste, or by use of a porte polisher.

Use of this paste was accomplished with no additional time requirement than for a routine prophylaxis. Thus, its use is indicated as a part of any public health or private office preventive dentistry routine.

Summary

In an over-all evaluation, the stannous fluoride-silex-silicone prophylaxis paste originally developed for a U. S. Air Force preventive dentistry program, is acceptable for clinical use with patients of 4-17 years of age.

Average patient's subjective taste acceptance of the paste was rated at 4.72 on a scale of 10 (0—BAD, 10—GOOD).

Average operator's objective evaluation of patient's taste acceptance was rated at 5.66 on a similar scale of 10.

Average operator's evaluation of abrasiveness of the paste was 6.65.

Neither staining, nor blanching of gingival tissues presented a problem area; the latter being minimized or eliminated by adequate rinsing technics.

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A Combined Approach by the General Practitioner and Orthodontist to the Solution of Certain Pedodontic Problems

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ABRAHAM KANER, B.S., D.M.D.**

INTRODUCTION

IN the resolution of some of the more difficult dental problems encountered in everyday practice, close cooperation between the general practitioner and orthodontist is most desirable to achieve the optimum treatment for the child patient. This combined clinical approach of the general dentist and orthodontist is particularly applicable to the problems involved in extensive carious involvement, congenital anomalies, space-maintenance, crossbites in the primary and mixed dentitions and fractured permanent incisors.

The following report illustrates how this approach can be applied. These patients were followed mutually over a period of ten years and will demonstrate the practicality of utilizing these combined efforts.

I. Extensive Carious Involvement

Very often parents do not seek dental treatment for the child patient until severe oral pain is experienced. When this occurs, the dentist is often faced with a condition of extensive carious involvement. This situation always presents a difficult restorative problem. Clinically, children with advanced caries and broken down primary teeth have loss of normal contact areas with resultant food impaction and periodontal disease. In addition, the normal mesio-distal relationship in the buccal areas has been markedly reduced to the extent that insufficient room for the normal eruption of the succedaneous teeth may exist.

When the teeth are excavated and properly prepared to receive dental restorations, frequently only a small amount of well supported teeth structure remains. The restoration of normal contact areas and proper vertical height is very difficult, if not impossible to achieve using conventional methods.

In resolving the dual problem of overcoming the loss of mesio-distal dimension and vertical height, well fitting, well contoured, orthodontic bands are used. These orthodontic bands serve as matrices for the insertion of the proper restorative dental materials and prevent the fracture of the extensive amalgam restorations and remaining tooth structures.

It has been observed that the cervical adaptation in well constructed orthodontic bands is superior to that obtained with prefabricated bands and crowns and the health of the periodontal tissues is better maintained.

Indeed, in the hands of a well-trained

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orthodontist the placement of these bands is an efficient and economically sound procedure. The placement of these bands when necessary is not a major factor. Young patients accept this treatment readily, since very little trauma is experienced.

Many of these cases present an existing orthodontic problem or a potential one. It is felt that as early as possible complete orthodontic records should be taken on these children. These records consist of the following:

1. Selective medical and dental histories.

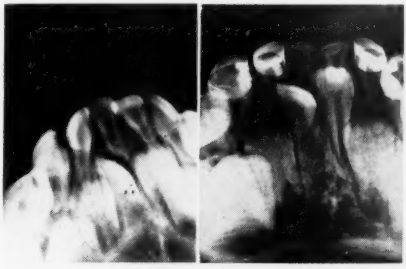

FIGURE 1. *(Left)* Intra-oral x-rays of mandibular anterior teeth with extensive interproximal carious involvement. *(Right)* Intra-oral x-ray of same patient with the necessary orthodontic bands in position over cavity preparations.

2. Cephalometric, lateral-jaw and intra-oral x-rays.
3. Plaster models of the teeth.
4. Kodachrome intra-oral photographs.
5. Front and side black and white facial photographs.

Moreover, when the orthodontic observation period ends and active treatment commences, the orthodontist in making his diagnosis and case analysis is assured that in borderline cases there has been no loss of mesio-distal dimension.

Finally, these bands can be readily removed by the general practitioner for any necessary clinical dental check-ups and x-rays. The bands are then recemented. (Fig. 1 and Fig. 2.)

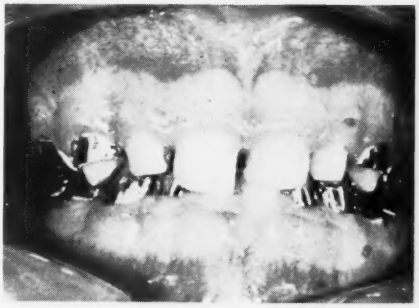

FIGURE 2. Intra-oral photograph showing orthodontic bands cemented.

II. Congenital Anomalies

The above described procedure is used in children with congenital enamel hypoplasias and other congenital anomalies involving the enamel or dentine. (Fig. 3.)

Again, the integrity of the arches and normal occlusion is maintained until the patients are ready to receive permanent crown restorations and active orthodontic treatment if necessary.

III. Space Maintenance

In the primary dentition, close coop-

FIGURE 3. Lateral jaw x-ray showing band on mandibular first permanent molar with extensive enamel hypoplasia prior to placement of amalgam restoration and space maintainer.

eration between the general dentist and orthodontist is essential for the design and construction of proper space maintainers which will not interfere with the normal facial and oral development. For

FIGURE 4. An example of a cemented lingual arch wire employed as a space maintainer in the mixed dentition.

a more detailed description of the various types of space maintainers the texts of Willett[1] and Moyers[2] are suggested.

In the mixed dentition period, it is imperative to determine the indications and contra-indications for space maintenance. Here again, the close cooperation of the general practitioner with the orthodontist is of paramount importance. Guided by techniques described in the orthodontic literature,[3, 4, 5, 6, 7] it is now possible to determine with greater precision the need for space maintenance or active orthodontic treatment.

When careful study of the facial dental records indicates the need for space maintainers, the authors prefer a fixed appliance. (Fig. 4.)

In the mixed dentition, although there has been premature loss of the first or second primary molars, a situation may exist in which mechanical space maintainers are not indicated. In the case shown in Figure 5 it was clearly evident from a complete facial dental analysis that there would be insufficient room for the succedaneous dentition to erupt into proper occlusion. Orthodontic treatment with a fixed appliance and a serial extraction procedure were utilized.

However, in those cases where the orthodontist, after careful study, feels that no extractions in the secondary dentition will be necessary, it is imperative for the general practitioner to insert proper space maintainers where primary molars are prematurely lost. These space maintainers will in most instances prevent malocclusion.

Where a malocclusion is present, and early treatment is not indicated, many complications may be avoided by the use of proper space maintainers until active orthodontic treatment is instituted. The point the authors wish to emphasize is that this close cooperation between the general practitioner and the specialist will lead to a more precise and

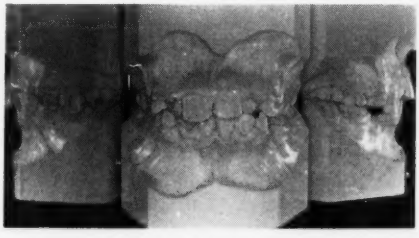

FIGURE 5. Models of case where early orthodontic treatment is indicated instead of space maintenance.

accurate diagnosis for the specific case under observation.

IV. Crossbites

It is extremely important for the orthodontist to record the dental-facial pattern of all class III malocclusions prior to any orthodontic treatment. The orthodontist can better differentiate the

simple from the more complex cases and guide the general practitioner in the treatment of the simple cases.

Orthodontic treatment for crossbites in the primary dentition is always indicated in class III actual or pseudo malocclusions. Wherever possible, simple cemented acrylic bite blocks can be employed by the general practitioner. (Fig. 6.)

In some patients, it is necessary to cement a fixed appliance and employ more extensive orthodontic procedures. (Fig. 7.) Crossbites in the cuspid area are managed by cemented bands with extensions for crossbite elastics.

Class III patients presenting an unfavorable facial growth pattern, characterized by an enlarged mandible, obtuse gonial angle, and an under-developed maxilla, should be treated solely by the orthodontist. Indeed, a severe unfavorable mandibular growth pattern may necessitate the combined efforts of an oral surgeon and orthodontist to correct the mandibular prognathism.

FIGURE 6. Intra-oral photograph showing simple cemented acrylic bite block to correct a crossbite in primary anteriors.

V. Fractured Permanent Maxillary and Mandibular Incisors

A very common problem encountered in general practice is the restoration of fractured incisor teeth. In patients with severe class II division/(Angle) malocclusion characterized chiefly by the very pronounced horizontal overjet of the maxillary incisors, the authors have observed an unusually high incidence of fracture. For this reason, in the mixed dentition period, one of the most important objectives in the orthodontic treatment of class II division 1 patients is to reduce the marked protrusion of the maxillary incisors. One of us (H. K.), has discussed the treatment of this type of malocclusion in a previous paper.[8]

In patients where fracture has already occurred and the patient is seen immediately, the standard acceptable restorative materials are employed to protect the

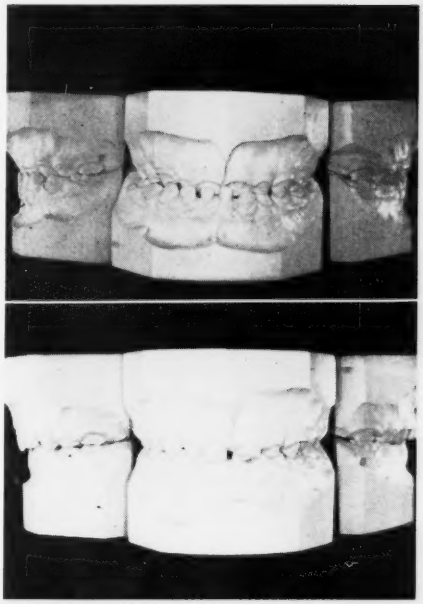

FIGURE 7. *(Above)* Models showing anterior crossbite requiring orthodontic appliance. *(Below)* Models of case shown above after correction. Note normal diastema between primary central incisors at this stage of dental development.

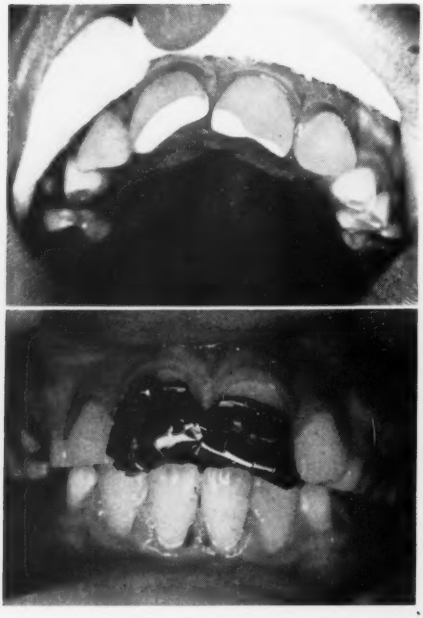

FIGURE 8. *(Above)* Intra-oral photographs showing restorative material applied to fractured maxillary central incisors. *(Below)* Subsequent placement of bands with band material spot-welded over incisal edges.

pulp. These techniques have been thoroughly discussed in the literature.[9, 10]

If, however, the patient does not seek dental attention until several days have elapsed after the fracture, the acceptable techniques are employed to ascertain the vitality of the pulp before applying the following procedure.

Over a period of nine years following fracture we have been able to maintain the vitality of such teeth and prevent subsequent fracture by utilizing individually constructed bands in which the incisal edge is protected by spot-welding band material on the biting surface. This band with its incisal apron is cemented into place after the pulp has been properly protected. (Fig. 8.) Subsequently, a permanent crown restoration can be placed on these fractured teeth when the roots are completely formed and when enough time has elapsed for sufficient recession of the pulp horns to allow for

FIGURE 9. *(Above)* Intra-oral photograph showing fractured maxillary central incisors (1951). *(Center)* Intra-oral photograph of case 9 above showing fractured central incisors covered with bands and spot-welded aprons (1951). *(Below)* Intra-oral photograph of case 9 above showing veneer crown placed on maxillary right central incisor and recontoured maxillary left central incisor. (1959)

proper and safe crown procedures. In many of our cases a wait of six to eight years has been necessary before permanent crowns have been placed. In some cases undergoing active orthodontic treatment, it has been possible to over-erupt and later re-shape the maxillary central incisor teeth thus eliminating the need for future placement of crowns. (Fig. 9.)

Finally, these teeth must be examined very thoroughly periodically to detect possible pulp degeneration and subsequent apical and periapical involvement. The health of the pulpal tissues must be assured before any crown procedures are attempted.

Summary

Techniques and observations utilizing a combined approach of the general practitioner and orthodontist in the management of some more difficult but common pedodontic problems have been described.

It is felt that the opportunity and stimulation of working in a dynamic period of rapid growth and development of the child, which is available in the period of the primary and mixed dentitions, will more than compensate for any trying moments of treatment. The patient as well as the dentists will benefit by this team cooperation.

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Dental Caries Experience of Mongoloid Children

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During dental examinations of mongoloid children of the Dixon State School, a remarkably low caries attack was observed among these children as compared with normal school children.

There are only a few and conflicting reports on the caries experience of mongoloids. Benda[1] quoted Nash's study of 84 mongoloids of which one had severe caries, 44 moderate caries and 39 no caries, as evidence of "a most conspicuous absence of caries." Brousseau[2] stated that teeth of mental defectives decay early and this was more marked in mongoloid children.

In order to resolve this disparity of opinions and establish whether this low caries was a characteristic finding of mongolism, a survey was made of mongoloid and non-mongoloid, congenital mental defectives. Comparison was made with non-mongoloid but mentally defective children (congenital) rather than with normal children, in order to establish whether there was a specific relationship between mongolism per se and the caries attack rate.

Our results showed a much lower caries incidence among mongols than among other congenital mental defectives. The caries attack rate in this group of non-mongoloid children with congenital mental defects was less than that observed in normal children. We therefore considered a low incidence of caries as a characteristic finding associated with the condition of mongolism.

Materials and Method

Two groups of mentally defective children were examined by at least two investigators, using a mirror, probe, and good lighting. Combined visual and tactile evidence was necessary before a lesion was counted as present.

The first group consisted of 106 mongoloid children. The second group consisted of 106 congenital mental defectives (non-mongoloid). Thirty-six of the mongols and 66 of the congenital mental defectives were examined at the time of their admission after an extended period of home care. The remainder (40 mongols and 40 congenital mental defectives) had been in the institution for one year or more; indeed, 86 per cent of these children had been there for three or more years.

The diagnostic, psychological and physical evaluation of the children was done by the Medical Staff of the Dixon School. Age distribution and mental levels of the two groups were comparable (table 1).

The institutional diet was analyzed and found to be nutritionally adequate. It was semi-solid in form and the amount of fermentable carbohydrates was as high as in an average American diet. Three meals were served each day and snacks between meals were rare.

The index of caries experience used was the number of decayed and filled permanent and primary teeth per 100

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TABLE 1

SUMMARY OF CARIES EXPERIENCE OF MENTAL DEFECTIVES AT DIXON STATE SCHOOL

Groups	*Number Patients Examined*	*Average Age (± S.D.)*	*I.Q. Range*	*Number (%) With Caries*	*Number of Teeth Examined*	*Number of Carious or Filled Teeth*	*Carious or Filled Teeth Per 100 Teeth Examined*	*df and DF Teeth Per Child*
Mongols	106	10.3 (± 3.05)	50-70	18 (17%)	2293	50	2.18	0.47
Congenital Mental Defectives	106	9.4 (± 3.76)	50-70	61 (57.5%)	2477	205	8.28	1.93

teeth examined. The high incidence of tooth loss (particularly the lower incisors) and very frequent presence of a mixed dentition was the reason for the choice of this index rather than the standard DMF (decayed, missing and filled teeth per 100 children examined).

Results

Table 1 shows the caries experience of the two groups of mental defectives. The mongoloid children showed a much lower caries attack rate than the non-mongoloid children. The caries experience of the non-mongoloid, mentally defective children was less than that of normal school children (Cohen and Massler[5]).

Since the effect of institutionalization might account for some part of the lower caries experience, a comparison was made of those children living under school and under home care. The results are shown in table 2. The mongoloid children had a lower caries experience than the congenital mental defectives at the time of their admission and their caries incidence decreased after one year in the School (2.5 to 0.2 decayed or filled teeth per 100 teeth examined). The opposite was true for the congenital mental defectives, caries experience increased after residence in Dixon State School (6.8 to 9.2).

Oral hygiene measures were practically non-existent among these children. Sordes with yellow staining of the teeth were present in most patients and a high

TABLE 2

CARIES EXPERIENCE OF CHILDREN UNDER INSTITUTIONAL AND HOME CARE

	Mongols		*Congenital Ment. Def.*	
	NUMBER EXAMINED	df AND DF TEETH PER 100	NUMBER EXAMINED	df AND DF TEETH PER 100
On Admission	36	2.56	66	6.8
After Residence in Dixon State School 1 or More Years	70	0.20	40	9.27

incidence of periodontal disease was observed, often leading to early loss of the permanent teeth, in particular the mandibular incisors.

Discussion

These findings support Benda's opinion but contradict Brousseau's. Surveys by Spitzer and Robinson[4] and Spitzer and Mann[3] found a high incidence of delayed and changed eruption patterns of the teeth in mongoloids, but made no comments about the caries experience. The delay in eruption of teeth may account in part for the lower incidence of caries.

Dietary factors were not considered a cause of the low caries experience in these children since the softened composition of the food and lack of oral hygiene would favor a higher caries attack rate.

Although the sample is small, institutionalization appeared to have opposite effects on the caries experience of the two groups of children. The associated finding of a high incidence of periodontal disease tends to support the clinical observation that young persons with severe periodontal disease tend to have a low caries experience.

Summary

A survey was made of the caries experience in two groups of congenital mental defectives (106 mongoloid and 106 non-mongoloid) to determine whether a low caries experience was a characteristic finding in mongols.

Conclusions:

1. The mongoloid children showed a much lower caries attack rate than the matched group of non-mongoloid children with other forms of congenital mental defects.

2. This difference was apparent in children before and after admission to the institution.

3. The effect of institutionalization on caries experience was different in the two groups examined. Caries experience was decreased still further after institutionalization of mongoloid children but was increased in children with other mental defects.

4. A low caries attack rate is considered to be characteristic of mongoloid children.

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Appreciation is expressed to Dr. Maury Massler, Head of Department, Graduate Pedodontics, University of Illinois for his guidance and encouragement and to the staff of Dixon State School, Dixon, Illinois for their kind cooperation.

The American Society of Dentistry for Children
Dan Mizzy Merit Award

1. The Award Contest is offered to Junior and Senior students during their undergraduate dental program.

2. The Chairman of the Pedodontic Department is asked to assist in the selection of an interesting case that the student can carry to completion during the undergraduate program. Needy children, or those that might not otherwise receive treatment, should be given preference in the selection.

3. The students should collect preoperative records of the case, including full mouth radiographs, study models, and if practical, photographs. A treatment plan should also accompany the records.

4. After the case has been completed, records must again be taken to show the work that has been accomplished for the child.

5. While it will be desirable, it is not necessary to submit a duplicate of appliances that may have been used in the management of the case, providing sufficient detail has been included in the treatment record.

6. All cases become the property of the A.S.D.C. and selected ones will be shown at the Annual Meeting. However, the committee, upon request, will return radiographs and other permanent records to the school.

7. Completed cases should be submitted no later than May 15, to Dr. Richard E. Jennings, University of Texas, Dental Branch, 6516 John Freeman Avenue, Houston 25, Texas.

8. Prizes will be awarded to three students: First prize—$200; Second prize—$100; and Third prize—$50.

Abstracts

Stress and Duodenal Ulcer—Lester R. Dragstedt: Paper Presented at A.A.A.S. meeting, April 25-27, 1960. Science, Vol. 131, No. 3409, P. 1317, April 29, 1960.

Although this paper has no outright evidence with dentistry in its contents, there is sufficient material present to be of deep concern to all dentists.

The author states that duodenal ulcers are caused by abnormal hypersecretions of gastric juice of nervous origin and supports this statement by evidence that duodenal ulcer patients secrete 3 to 10 times more acid in the empty stomach at night than do normal people. If a hypersecretion of this amount is produced in experimental animals they regularly develop duodenal ulcers; and if the vagus nerves to the stomach in these patients is divided, the hypersecretion is abolished and the ulcers heal.

An alternative concept was advanced that physical and mental stress produce ulcers. Such stress stimulates the hypothalamus which in turn liberates ACTH which then produces cortisone. The writer of the article shows that ACTH, cortisone, and epinephrine do not stimulate gastric secretion and that physical and mental stress do not stimulate gastric secretion if the vagus nerves have been cut. . . . It is believed that the stresses of modern life increase the activity of the vagus nerves which in turn causes an increase in stomach motility and an abnormal hypersecretion of acid gastric juice.

Manuel M. Album

Histologic Effects of Various Drugs on Amputated Pulps of Rat Molars—Marvin Kozlov, D.D.S., and Maury Massler, D.D.S.: Oral Surgery, Oral Medicine, and Oral Pathology, Vol. 13, No. 4, P. 455-469, April 1960.

This rather extensive and exhaustive study explains the histologic response of the amputated pulp of rat molars to specific drugs for the purpose of defining those conditions which either promote or retard healing.

The pulps of 111 maxillary first molars were amputated and various medicaments applied on saturated pieces of filter paper or as pastes were placed in the teeth and covered with silver amalgam fillings. Twenty-one teeth were used as unoperated controls. The animals were sacrificed fourteen days later and the pulps studied in serial histologic sections.

The various zones of inflammation and healing occurred with responses to various drugs and medicaments. The study verified other reports that the response of the pulp was stereotype and followed a definite sequence. The drugs used consisted of anti-inflammatory agents such as chlor-trimeton and the cortisone derivatives, vasoconstricting agents, irritants such as formaldehyde and cresatin, oxygenating agents, and controls consisting of calcium hydroxide and zinc oxide and eugenol.

Results in this study fell into four groupings depending on the type of reparative response and defense. The agents used affected the rate of healing by accelerating or depressing the defensive reaction. Stimulation of bridging over the amputated area did not appear to be related to the presence of calcium ions, hydrogens ions, irritant substances or oxygen.

This excellent article should be a must for all practitioners to keep for reference in their work with children.

Manuel M. Album

Occupational Dermatitis in Dentists—D. A. Wallace, Ph.D., and J. P. Weinmann, M.D.: International Dental Journal, Vol. 10, No. 1, P. 75-88, 1960.

This timely subject has been aptly reviewed by the authors. They are emphatic in asserting that occupational dermatitis among dentists is almost always of the contact

type. While the dermatitis caused by anesthetics and disinfectants is often limited to the fingers and occasionally on the face and other parts of the body, that caused by eugenol is severe on the face, neck, upper chest, thighs and scrotum. This has been reported in the literature during the past forty years.

The article states that the likelihood of dermatitis increases with the frequency and intensity of exposure whether the cause be a primary irritant or a sensitizer.

Drs. Wallace and Weinman give some excellent preventive measures that should be observed by all dentists. Washing of the hands only when necessary, the use of heat methods of disinfection for instruments in preference to chemical methods, handling of drugs and dental materials with instruments, avoiding getting the spray of anesthetic solutions on the face, having the patient rinse his mouth after injection of the local anesthetic, and using rubber gloves or finger cots when injecting the anesthetic, consulting a dermatologist when possible.

Diagnosis is not usually difficult, treatment is relatively simple, and the prognosis is favorable in the majority of cases, but hypersensitivity is likely to persist once it is established.

MANUEL M. ALBUM

FIRST ANNUAL PEDODONTIC SEMINAR

Sponsored Jointly By

THE FLORIDA UNIT
AMERICAN SOCIETY OF DENTISTRY FOR CHILDREN

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THREE FULL DAYS
JANUARY 16, 17, 18, 1961

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   "Interceptive Orthodontics and Habits Appliances"
2. Dr. Kenneth E. Lawrence, Kansas City, Missouri
   "Operative Dentistry and Fixed Prosthetic Appliances"
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PROGRAM PREVIEW

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Activities

NOW!

1961 Annual Meeting of the American Society of Dentistry For Children

FRIDAY, SATURDAY AND SUNDAY

OCTOBER 13, 14, 15, 1961

BELLEVUE-STRATFORD HOTEL

PHILADELPHIA, PA.

SCIENTIFIC PROGRAM PREVIEW

SCIENTIFIC SESSIONS AND REGISTERED CLINICS

SATURDAY—

October 14, 1961—8:45 to 10:15 A.M.

CLOSED CIRCUIT TELEVISION PROGRAM ON CLEFT PALATE

10:30-12:00 Noon

REGISTERED CLINICS

SUNDAY—

October 15, 1961—9:00 to 10:30 A.M.

REPEAT REGISTERED CLINICS

11:00 A.M. to 1:00 P.M.

DEMONSTRATION AND/OR TABLE CLINICS

By dental schools, state unit personnel and other organizations.

2:00 to 4:00 P.M.

SYMPOSIUM ON GROWTH PROBLEMS

CLOSED CIRCUIT TELEVISION PROGRAM

Cleft Palate Team of The Children's Hospital of Philadelphia

SUBJECT: A CLEFT PALATE SURGICAL PROCEDURE AND REVIEW TEAM EVALUATING CLEFT PALATE PATIENTS

TV Program Sponsored by Wyeth Laboratories

REGISTERED CLINICS

1. AN UNDERSTANDING OF GROWTH AND DEVELOPMENT IN THE PRACTICE OF PEDODONTICS
   DR. SAMUEL PRUZANSKY AND ASSOCIATES
   Associate Director—Cleft Palate Clinic and Training Program
   Center for Handicapped Children, Chicago

2. THE USE OF REMOVABLE APPLIANCES IN PREVENTIVE OR INTERCEPTIVE ORTHODONTICS
   DR. SIDNEY B. FINN
   Professor of Pedodontics
   University of Alabama, School of Dentistry

3. GENERAL ANESTHESIA FOR CHILDREN
   DR. LEONARD BACHMAN
   Director, Department of Anesthesiology
   The Children's Hospital of Philadelphia

4. PROSTHETIC APPLIANCES FOR CHILDREN
   DR. ALBERT L. ANDERSON
   Past President
   American Society of Dentistry for Children

5. LOCAL ANESTHESIA AND ORAL SURGERY FOR CHILDREN
   DR. NORMAN OLSEN
   Associate Professor and Chairman of Department of Pedodontics
   Northwestern University, School of Dentistry

6. **ORAL LESIONS**
Dr. M. Michael Cohen
Stomatologist, Boston Floating Hospital, Faculty
Tufts University School of Medicine

7. **TREATMENT OF FRACTURED PERMANENT ANTERIORS**
Dr. John E. Gilster
Professor of Pedodontics
Washington University, School of Dentistry

8. **PATIENT MANAGEMENT**
Dr. Harold K. Addelston
Professor of Pedodontics
New York University, College of Dentistry

9. **PRACTICE MANAGEMENT**
Dr. Francis W. Summers
Former Professor and Head, Department of Pedodontics
University of Southern California, School of Dentistry

10. **PULP THERAPY FOR THE PRIMARY AND YOUNG PERMANENT TOOTH**
Dr. David B. Law
Professor of Pedodontics
University of Washington, School of Dentistry

11. **GENERAL OPERATIVE PROCEDURES FOR CHILDREN**
Dr. Ralph L. Ireland
Dean and Professor of Pedodontics
University of Nebraska, College of Dentistry

12. **PERIODONTAL DISEASES OF CHILDREN**
Dr. Harvans Bhatia
Assistant Professor, Department of Pedodontics
University of Southern California, School of Dentistry

SATURDAY SESSION ONLY

13. **A NEW APPROACH TO CARIES CONTROL**
Dr. Maury Massler
Head of the Department of Pedodontics
University of Illinois, College of Dentistry

14. **AUDIO-VISUAL EDUCATION FOR PARENTS**
Dr. Roy M. Wolff
Member—American Academy of Pedodontics

PANEL DISCUSSION

"INTERPRETATION AND TREATMENT OF GROWTH PATTERNS IN CHILDREN"

Moderator: Dr. Sidney I. Kohn
Professor of Pedodontics
Fairleigh Dickinson School of Dentistry

Panelists: Dr. Thomas K. Barber
Associate Professor, Department of Pedodontics
University of Illinois, College of Dentistry

Dr. John R. Thompson
Professor and Chairman, Department of Orthodontics
Northwestern University, School of Dentistry, Chicago, Illinois

Dr. Samuel Hemley
Professor of Orthodontics
New York University, College of Dentistry

SOCIAL PROGRAM

FRIDAY

4:00 P.M.	Registration and Get-together
7:00 P.M.	Pennsylvania Cocktail Party, Burgundy Room
	Evening Free for Theatre Going, Philadelphia Tours, etc.

SATURDAY

10:15 A.M.	Dairy and Apple Break
11:30 A.M.	Women's Philadelphia Tours and Sightseeing
12:30 P.M.	Scientific Luncheon, Burgundy Room, Bellevue-Stratford Hotel
6:30 P.M.	Cocktail Party, 18th Floor, Bellevue-Stratford Hotel
7:30 P.M.	President's Banquet, 18th Floor, Bellevue-Stratford Hotel

SUNDAY

10:00 A.M.	Dairy and Apple Break
1:00 P.M.	Luncheon (Open)
Afternoon	Guided Tour of Philadelphia for the Ladies
4:30 to 7:00 P.M.	Farewell Cocktail Party, Burgundy Room

IN YOUR FREE TIME

Wonderful Philadelphia awaits you with its tours, theatres, movies, radio and television studios, night clubs, shopping, museums, exhibits and architectural wonders.

Los Angeles Low-Down—by Ted Levitas

PRESCRIPTION: Mix equal parts of hard work, good weather, fine programming, and fellowship.

RESULT: Another—the 33rd—terrific ASDC annual meeting.

Mode Perry, in the brightest of red blazers, certainly provided just what "the doctor ordered." Ergo, Los Angeles was the setting for a most enjoyable meeting. Since the locale was in SOUTHERN California, the reason for the great hospitality is rather obvious!

"Big Ben" Rabinowitch is a super-salesman. He was busy hustling tickets for the luncheon, and, I do believe, sold some to fellows who had already eaten! And past national president Al Anderson was just about as persuasive when pleading for banquet reservations. Nobody had to be persuaded to meet all the lovely ladies in Hawaiian costume and accept their multicolored leis. Those gals were all over the place! Of course, some of our own members looked pretty good, too—California's Evo Sulon, Georgia's Virginia Englett, Florida's Ellen Crockett, Connecticut's Naomi Dunn among many others.

This time "Tiny" Konikow was conspicuous by his absence, and he was sorely missed. And talk about being missed, Alabama's Sidney Finn missed his luggage—all of it. In fact, it may still be missing since the airline lost it! But, as usual, Sid smiled about the whole thing. There weren't any smiles present during the serious discussion Vic Lenchner and Hugh Kopel were having amidst the Table Clinics. A serious discussion relating to pedo? Not exactly—they were concerned about the high rates for car rentals in California!

Highlight of the business meeting—aside from the masterful job of presiding done by out-going president Bill Brown—was the unique method of extending the invitation to meet in Philadelphia next year. Manny Album as the reader and Ray Werther and Dave Soricelli as the bell ringers made their way to the microphone dressed in full colonial regalia. (See picture page.) The whole idea was cleverly conceived and well-executed and bodes well for next year.

New president, Texan Jim Simmons, and next in line Ralph McDonald were busy along with secretary Wes Young and executive secretary Frank Tuma seeing to it that everything moved according to schedule. Four new Units were welcomed into the fold by President Brown: Kansas—John Copeland accepted the charter; Louisians Ed Hannie accepting; Mississippi—Charley Blue accepting; and South Dakota—Harold Erickson accepting. (See picture page.)

Lots of business was presented and discussions were often spirited. Roy Lindahl, Tar Heel late of California, wore his arm out seconding motions. The time schedule was met down to the last second—and everyone seemed at least moderately happy when adjournment came.

Veteran Paul Weber was a most efficient ticket taker at the banquet and his watchful eye kept out any would-be gate-crashers! John Sharpley, hard-working member from Baltimore, and smiling Fred Ehrlich extended the glad-hand to this thirsty reporter. Jack Eisenson was enjoying himself to the fullest, and Hugo Kulstad cut an impressive figure in his black-tie attire.

Good food, Hawaiian Luau style, was plentiful. Enjoyed eating with Big Ben Rabinowitch, his associate, Edith Strauss and her M.D. husband, Reuben, Chicago's George Teuscher and Norm Olsen, New York's Hal Addelston (with a gleam in his eye), Evelyn Strange from Oregon and her psychologist husband, Frank, and my friend Jim McKnight, from Memphis. After all the food, that should have been enough. But, the Brown Derby beckoned in the wee, sma' hours. Harry Boblasky and Paul Diamondstein (Birmingham's

Gold Dust twins), and Dave Webber, among others, were busy feeding their faces all over again.

Red eyes were prevalent on the last day. But folks still wanted to talk. Lou Dubin and William Guard nailed Bill Brown to a table and were bending his ear. Max Poirrier, Dick Jennings, Jack Dockstedder, H. O. Simmons and a throng of others threaded their ways in and out of the Ambassador lobby realizing the upcoming Aloha party would end it all for another year.

This year's prescription worked fine. The patients request that it be refilled—and taken in the City of Brotherly Love! See you in Philly in '61.

The American Board of Pedodontics Diplomates Certified—1960

Dr. Harold K. Addelston
424 Madison Avenue
New York 17, New York

Dr. Melvin Bellet
1 East Central Boulevard
Palisades Park, New Jersey

Dr. Charles L. Boyers
The Children's Hospital
300 Longwood Avenue
Boston 15, Massachusetts

Dr. Rank H. Daniel
The University of North Carolina
School of Dentistry
Chapel Hill, North Carolina

Dr. Milton E. Gellin
University-Cedar Medical Center
10900 Carnegie Avenue
Cleveland 6, Ohio

Dr. William S. Kramer
The University of Nebraska
College of Dentistry
Lincoln 8, Nebraska

Dr. Thompson M. Lewis
School of Dentistry
University of Washington
Seattle 5, Washington

Dr. Barry G. Miller
1529 Elizabeth Avenue
Charlotte 4, North Carolina

Dr. John R. Mink
Riley Dental Clinic
Indiana University
1100 West Michigan Street
Indianapolis, Indiana

Dr. Norman H. Olsen
Northwestern University
Dental School
311 East Chicago Avenue
Chicago 11, Illinois

Dr. Lester O. Ruud
2701 North Flagler Drive
West Palm Beach, Florida

Dr. Raymond H. Sawusch
The University of Michigan
School of Dentistry
Ann Arbor, Michigan

Unit News

Joining our four new State Units—Kansas, Louisiana, Mississippi, South Dakota—is Delaware. . . .

"Quakers" announce the next Annual meeting at the Bellevue Stratford Hotel in Philadelphia, October 1961. . . .

Include dental students in your next membership drive! Next deadline date . . . JANUARY 25.

TINY KONIKOW

SOUTHERN CALIFORNIA

From Executive Secretary Lorraine Duncan comes the news that their Unit had a highly successful meeting on Sept. 26 at the Rodger Young Auditorium with guest speaker, Reidar F. Sognnaes.

Dr. Sognnaes who is Dean and Professor of Oral Biology at the UCLA Dental School presented a most interesting and informative talk on "Progress and Problems in Preventive Dentistry."

Congratulations to Richard Comen, Editor of Pedo, Ltd., a bulletin of the ASDC Southern California Unit. Help him to keep the bulletin going by sending your news! The address is 1244 Seventh St., Santa Monica, California.

NORTHERN CALIFORNIA

Here is Jerome Leitner's report verbatim. Amidst the splendor of the scene of the 1960 Winter Olympics, Squaw Valley, the Northern California Unit held its Fifth Annual Seminar. With red eyes and breath to match, we were particularly impressed with the swinging abilities of Benny Goodman and Red Norvo. The serious part of the meeting was fully attended and extremely well received. John Tocchini gave a talk on "General Anesthesia and Operative Dentistry." "Practical Pharmacology" was covered by Don Zimmerman.

The meeting was brought to a close with a panel discussion on "Tooth Guidance and Space Maintenance" with Irwin Beechen, Charles Sweet, Jr., and Barry Rudine. Several cases brought to the meeting by members were discussed. All in all, the educational portion of the program was sensational.

Socially, too, the meeting was a big success. There was fishing, a golf tournament for both sexes and a nice dinner at the North Shore Lodge at Lake Tahoe. It's meetings like this that maintain the enthusiasm of the members. When a

woman is in the background to push just a little, the turnout is always greater. The committee for next year will be hard put to outdo this one.

Colorado

Jack Eisenson "pinch-hitting" for Lou Dubin reports that the 5th Annual Seminar held in August was a great success with the biggest turnout of any of the previous two day seminars. Dr. Album gave a most informative talk on "Patient Management in Pedodontics." Russ Roder and Joe Beaghler are busy with plans for the Denver Dental Association Pre-School Exam program which involves about 40 schools in the area. Denver dentists examine each pre-school class of about 30 children after which they inform the parents on a good dental health program for the children.

The Colorado Unit is proud, and rightfully so, that member Bill Cody is President-Elect of the American Academy of Pedodontics.

Jack Eisenson will travel to Europe again the latter part of November to lecture for the 34th Annual Dental meeting in Paris, France. His topic will be "Pedodontics for the General Practitioner."

Delaware

On October 26, 1960 an organizational meeting was held by the ASDC members at large in the State of Delaware. The following officers were elected:

President	Fredrick Lutz, Wilmington
President-Elect	Gilbert Kates, Wilmington
Vice-President	Ronald E. Collins, Newark
Sec.-Treas.	Walter Bartoshesky, Wilmington

A petition for a charter for the Delaware Unit has been prepared and sent to the Executive Council for their consideration. A hearty welcome to you folks. We hope to hear more about your activities as time goes on.

Florida

Reporter Tony Shows is happy over the great response to the Postgraduate Seminar by Dr. Francis W. Summers on December 2-4, 1960 which was held in Jamaica.

Gerald Halker, Charles Fain and Neil Powell are completing details for the First Annual Pedodontic Seminar to be presented at Gainesville, Florida on January 16 thru January 18, 1961. (See page 206, Third Quarter of Journal.)

Delegates and alternates from the Florida Unit who attended the Annual meeting in Los Angeles were: Vic Lenchner, John Tabak, Max Poittier, George Stark, Ellen Crockett, Fran Vason and Fred Crockett. They all had a wonderful time and extend sincere thanks to the host Unit, Southern Cal. for their hospitality.

Georgia

Nice to hear from Ted Levitas with the news of his Unit. Here it is. The Sixth annual seminar was held at Atlanta on Sept. 18 and 19 with over 40 persons attending. Ralph McDonald lectured on "Treatment Planning," "Pulp Therapy," and "Caries Control" and as usual did a very fine job.

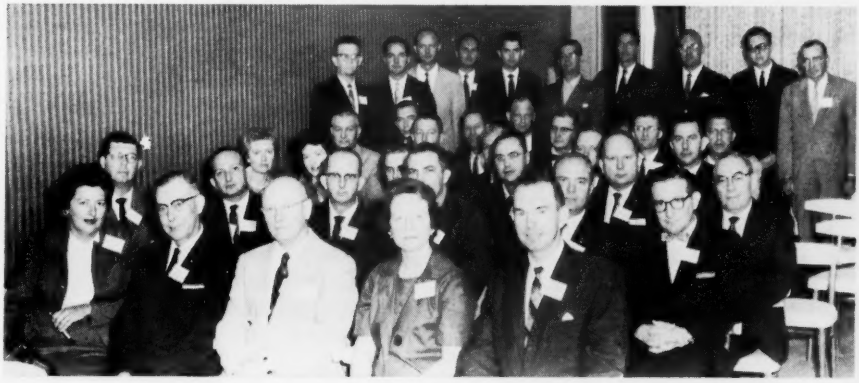
New officers of the Georgia Unit are:

President	Mary Lynn Morgan
President-Elect	Harold Lanier
Vice President	William Shupert
Secretary-Treasurer	Marilyn Stone

Members of the Unit have been busy and on the "go." Virginia Englett made it to the ASDC meeting and is back now from taking a postgraduate course at the University of Alabama. Mary Lynn Morgan attended the Academy of Pedodontics meeting in Boulder, Colo-

Coffee Break during Georgia Unit Seminar. On the right, Marilyn Stone pours, Ted Levitas is on the phone, Virginia Englett smiles. Center back, Mary Lynn Morgan listens, Harold Lanier grins. Left front, T. Eros has a quizzical look while listening to Ben Hampton, left.

New Officers of Georgia Unit after installation. Left to right: William Shupert, Vice-Pres.; Mary Lynn Morgan, Pres.; Ralph McDonald; Harold Lanier, Pres.-Elect; and Marilyn Stone, Sec.-Treas.



Georgia Unit Seminar—The group "en masse."

rado and Ed Hibbard sat in on a meeting for the White House Conference on Children which was held in Athens, Georgia. Ted Levitas also was among those present at the ASDC meeting and has been on a lecture trail recently. He spoke to the Southeastern District Dental Society of Georgia in June, to the Northwestern District on Nov. 9 and the Jacksonville District Dental Society on Nov. 15. His subject was "Dentistry for Children—for You."

Hawaii

Here is the news from the Aloha state. The quarterly meeting of the Hawaii Unit was held on Aug. 2, 1960 at the Japanese Chamber of Commerce Building. Guest speaker was Louis DeMeo of Oakland, California. He spoke on "Modification in Pedodontic Equipment and Instruments" and illustrated with colored slides the arrangements of his office for greater efficiency in handling the child patient. He also displayed some of his DeMeo instruments.

The Annual meeting was held in conjunction with the Pan-Pacific Dental Conference on October 24 at Elliot's Chuck Wagon. More of the details of this meeting will appear in the next issue of the Journal.

Illinois

Many thanks to Mark Mendelsohn for his usual nice bit of reporting. Here is what he reports of his Unit. There is much activity in the Illinois Unit. The Annual meeting on November 16 featured Henry Fineberg, associate professity and Kenneth Wessels, past professor of Pedodontics, State University of Iowa as guest speakers. Discussions explored the interaction between the child and doctor and the psychological management of child. The meeting was very well attended with a large delegation of colleagues in the downstate area.

Aubery Lauterstein has developed a program for the North Side Branch of the Chicago Dental Society with the theme, "Adventures in Clinical Practice." Those who will participate are: Maury Massler, Tom Barber and Sam Pruzansky.

A Constitution for the Illinois Unit has been finalized, approved and ratified. If any State Units are in the process of developing a constitution, the Illinois Unit will be glad to offer advisory services. (Kindly write: Dr. Mark J. Mendelsohn, 4753 Broadway, Chicago, Illinois for this information.)

The Unit looks forward to a fruitful year in membership expansion, especially of student members of local dental schools. Greater organized efforts will be made to improve public and professional relations during Children's Dental Health Week.

Indiana

We really have the news from Indiana this Quarter. Many thanks, Elizabeth Graves. The Indiana Unit held its Second Annual Spring Seminar at French Lick and it was a tremendous success. Headliner Mel Noonan did a masterful job in combining science and entertainment. An innovation was a luncheon discussion with each table headed by a leader with a specific subject. The Ohio Unit joined in the meeting and their support was excellent not only in attendance but also in active participation on the program.

During the past year a student membership program was inaugurated. The following discussions were arranged for the students:

Use of Rubber Dam in Dentistry for Children—Paul Starkey

Panel Discussion moderated by Richard Howard:
Use of Auxiliary Personnel—James Roche
Management of the Child Patient—Arthur Klein
Parent Education—Dick Jennings
Appointments & Recalls—Elizabeth Graves
Panel Discussion:
Premedication of the Child Patient—Dave McClure, John Mink, Charles Hutton

The Annual Fall conference was held at Bloomington, Indiana on Oct. 7, 1960 in conjunction with the Indiana University Dental Alumni week-end. The following program was well received:

Panel Discussion on Parent Management moderated by James Roche
In Cases of Handicapped Patients—John Mink
In Rampant Caries Cases—Dave McClure
Financial Responsibilities—Richard Howard
In Cases of Behavior Problems—Arthur Klein

Dr. Arthur Mickler from Louisville, Kentucky was guest speaker on the subject "Restorative Techniques for the Child Patient."

Members of the Unit are making plans for Children's Dental Health Week in February 1961. Last year under the sponsorship of the Indianapolis District Dental Society and the Indanapolis Merchants Ass'n headed by Art Klein a contest was held in which the "Winning Smile" received an all expense trip to Disneyland. Second and third prizes were merchandise certificates. The awards were made at a banquet with a surprise presentation of a new hat to the teacher of the winner.

The Unit regrets that they are losing one of their hardest working and most able members, Dick Jennings, who has accepted a position at the University of Texas in Houston.

Officers elected for 1960-61 are as follows:

President ..... D. C. Dicks
President-Elect ..... James Roche
Vice-President ..... Richard Howard
Secretary-Treasurer ..... Raymond Rothaar

Iowa

From Duane Schmidt comes the latest news of the Iowa Unit. Miles Olson, president of the Unit, has completed arrangements for the annual Spring meeting. Dr. Sidney B. Finn, professor of Dentistry at the University of Alabama, will be guest speaker at the meeting which will be held in Des Moines on April 10, 1961. His discourse will be in three parts titled "Cavity Bases, Subbases and Pulpal Response to These Agents"; "Child Management" and "Injuries to Primary and Young Permanent Teeth." We can readily see that programs such as these are one of the reasons that the Unit now boasts of 116 members. Nice going, Iowa!

A dental health exhibit, the joint effort of the Maryland State Dental Association and the Maryland Society of Dentistry for Children, drew high praise as one of the educational features at the Maryland State Teachers' Convention in Baltimore Oct. 13-14. Here, left to right, Dr. Morton J. Goldiner, Dr. Philip L. Block, Dr. William Schunick, Dr. Roy Bridger, and Dr. Samuel Friedman distribute literature to Miss Dorothy Regester of School No. 76.

Michigan

The first meeting of the Michigan Unit was co-sponsored with the Oakland

County Dental Society on October 11, 1960 at the Kingsley Inn, Bloomfield Hills, Michigan. One hundred sixty-two were present and enjoyed a most informative and interesting presentation on "Interceptive Orthodontics and General Practice" given by the London Orthodontic Study Group. The following men from the Group presented the program:

Differential Diagnosis	J. Bruce Taylor
Arch Length Maintenance	James G. Miller
Versions and Crossbites	John A. Reid
Treatment Planning	Peter E. Currie

It is interesting to note that this group of men are general practitioners who have schooled themselves on Interceptive Orthodontics under the supervision of two practicing orthodontists in the London area. They are to be highly commended.

Hugh Kopel has been elected as vice-chairman of the Professional Advisory Board of the United Cerebral Palsy Ass'n of Michigan. Hugh prepared and presented a scientific exhibit for the 101st session of the American Dental Association in Los Angeles. Members wishing a copy of the brochure "A Comparison of Ataractics and Barbiturates for Dental Premedication" can write to: Hugh Kopel, 19933 Livernois, Detroit, Mich.

Reports from Indiana are that Mel Noonan had some nice presentations on "Practice Management" and "Treatment of Fractured Anteriors" at their last Annual Spring Seminar held at French Lick . . . and good entertaining stories, too.

Will Fletke is taking a very active part in programming via radio as a moderator in a Dental Health education series in the Lansing, Michigan area.

Tiny Konikow spoke to the members of the Tri-County Dental Society in Bay City, Michigan on Sept. 28, 1960. His topics were "Preoperative Sedation and Tranquilization" and "The Control of Problems in Pedodontics." On November 7, 1960, Tiny also presented the two subjects to the 3rd Councilor District meeting at Hotel Northland, Green Bay, Wisconsin. This district meeting represented seven Northeastern Wisconsin dental societies.

Helen Garvey, Virginia Savage, Lucille Klein and Charlotte Wetherald participated in the 37th Annual meeting of the American Dental Hygienists Ass'n at Los Angeles on October 17-20, 1960.

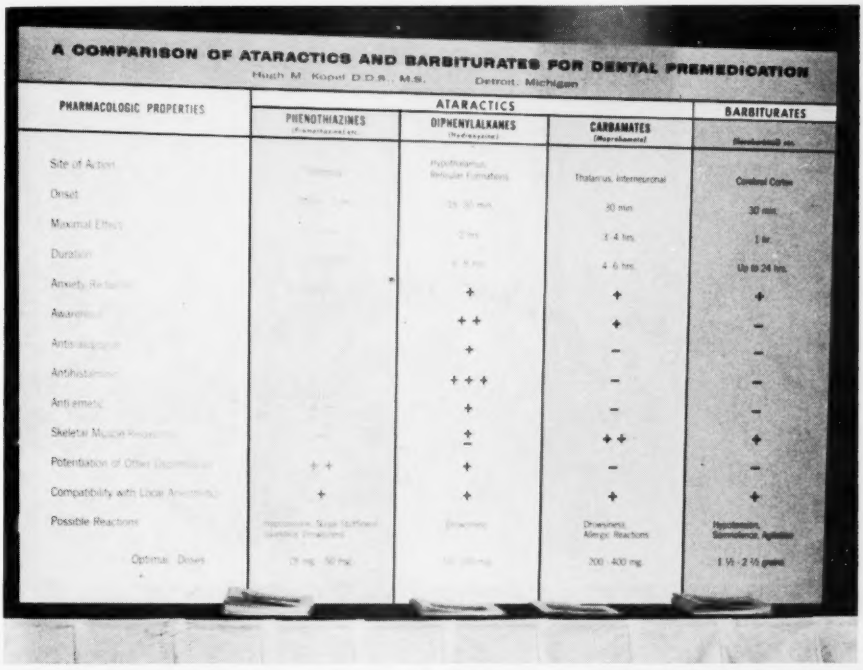
Members Marvin Davis, William Travis, Joseph Cabot, Richard Christl, Harold Holden, Myron Kaufman, Harold Maxmen and Walter McBride were part of a committee who prepared a dental exhibit which won first prize over all professional exhibits at the 1960 Michigan State Fair.

Harold Maxmen and Al Seyler were active in a continuing education program before various District Dental Societies in the upper Peninsula from September 12-16, 1960. This program was sponsored by the Michigan State Dental Ass'n and the Michigan Department of Health. Harold spoke on "Practical Endodontics" and Al presented "Dentistry for Children as Part of a General Practice."

An essay titled "Rationale of Surgical Intervention in Endodontics" was presented to the California Academy of Endodontics by Harold Maxmen on October 19, 1960.

And, congratulation to two immediate past presidents from Ann Arbor—Joseph Hartsook, American Academy of Pedodontics and William Brown, American Society of Dentistry for Children.

Dick Christl substituting for reporter Joe Engelman reported that the Na-



A COMPARISON OF ATARACTICS AND BARBITURATES FOR DENTAL PREMEDICATION

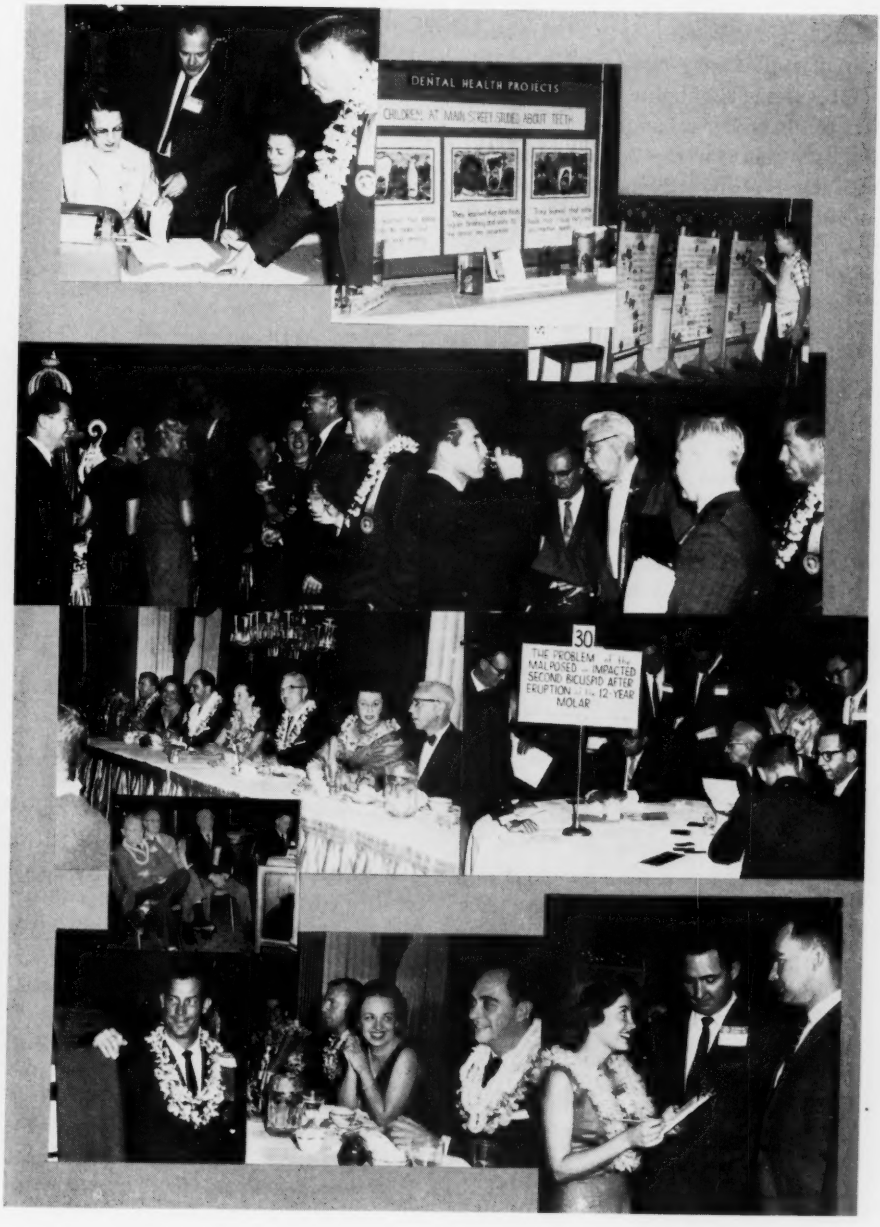
Hugh M. Kopel D.D.S., M.S. Detroit, Michigan

PHARMACOLOGIC PROPERTIES	ATARACTICS			BARBITURATES
	PHENOTHIAZINES (Promethazine)	DIPHENYLALKANES (Hydroxyzine)	CARBAMATES (Meprobamate)	(Secobarbital) etc.
Site of Action		Hypothalamus, Reticular Formations	Thalamus, Interneuronal	Cerebral Cortex
Onset			30 min.	30 min.
Maximal Effect			1-4 hrs.	1 hr.
Duration			4-6 hrs.	Up to 24 hrs.
Anxiety Reduction		+	+	+
Sedation		+ +	+	−
Anticonvulsant		+	−	−
Antihistaminic		+ + +	−	−
Antiemetic		+	−	−
Skeletal Muscle Relaxation		±	+ +	+
Potentiation of Other Depressants	+ +	+	−	−
Compatibility with Local Anesthetics	+	+	+	+
Possible Reactions	Hypotension, Stupor (Sufficient Quantity Produces)	Drowsiness	Drowsiness, Allergic Reactions	Hypotension, Somnolence, Agitation
Optimal Dose	25 mg. - 50 mg.	50 - 100 mg.	200 - 400 mg.	1 ½ - 2 ½ grains

Scientific Exhibit for Annual Session of the American Dental Association prepared by Hugh Kopel, Detroit, Michigan.

Planning Committee for 13th Annual Children's Dental Health Day co-sponsored by the Detroit District Dental Society, and the Michigan Society of Dentistry for Children. Left to right: Walter Niemann, Sec'y of MSDC; Mrs. Helen C. Allen, Exec. Sec'y, Detroit District Dental Society; Z. Konikow, President of MSDC; L. Bartoszewicz, Richard Christl, chairman; and Pierce McLean.

Los Angeles Meeting
1960
INTERCEPTIVE
FIRST PERMANE
25
LOWER LATERAL
INCISOR


DENTAL HEALTH PROJECTS
30
THE PROBLEM of the MALPOSED — IMPACTED SECOND BICUSPID AFTER EXUPTION — 12-YEAR MOLAR

tional meeting was GREAT. Delegates were Hugh Kopel, Joe Cabot, Dick Christl and Walter Niemann.

One of the highlights of the meeting was the President's banquet held in the Embassy room at the Ambassador Hotel. The Hawaiian theme was used . . . music, food and leis, and we understand that several of the members (especially, Pres. Brown) were quite proficient in the art of "Hula-ing" by the end of the evening.

Bell-ringing Quakers (Manny Album and a couple of supporters) in their unique way announced that the next meeting of the ASDC will be on October 14-15, 1961 at the Bellevue-Stratford Hotel in Philadelphia.

Plans are in the making for the 13th Annual Children's Dental Health Day on February 15, 1961 which will be co-sponsored with the Detroit District Dental Society. Arrangements have been made to have Dr. Clinton Emmerson of Los Angeles as guest speaker. The Unit is also working closely with the Oakland County Dental Society for a Career Day program in conjunction with National Children's Dental Health week.

Reports have been pouring in from all the States regarding the marvelous time everyone had at the National meeting. The Michigan Unit wants to join in extending sincere thanks to Mode Perry, convention co-ordinator, and his committeemen for their wonderful hospitality.

Minnesota

Welcome to Ned Brown, new reporter for the Minnesota Unit and here is what he has to report. Over 240 attended the 11th Annual all-day meeting of the Unit on Sept. 22, 1960 at the Mayo Memorial Auditorium, University of Minnesota Campus. Bob Boller did an excellent job of arranging the meeting.

Dr. Earl Shepherd from St. Louis presented "The Practical Approach to Preventive Orthodontics" and Dr. Harry Sicher of Chicago gave a dramatic and intriguing address on "How the Primary Teeth Erupt." Luncheon speakers were Dr. Ralph McDonald, vice-president of the ASDC and Dr. Wm. Crawford, dean of the Dental School, University of Minnesota.

Gopher ASDC'ers already in "high gear" rolled into their second meeting on October 25 with full steam at the Normandy Hotel to hear delegates to the National meeting in Los Angeles present their reports. A symposium on Audio-Analgesia was also presented by panelists: George Porteous, Bill Braasch and Irving Posnick. This subject was given a most discerning appraisal and many misconceptions were corrected.

The Golden Gopher Unit again got down to "brass tacks" on Nov. 15, 1960 at the Normandy Hotel in Minneapolis and heard panelists, Don Hurwitz, Bob Boller, and Jack Anderson discuss "Dental Emergencies for Children."

Ray Peterson, president of the Minnesota Unit reports the membership is up and the increase is due to the student membership program. He also reported that members Herschel Kaufman, Dave Litman, Harvey Gilbert, Irving Posnick, Louis Weiss and Bob Boller participated in a Seminar on "Hospital Dentistry" at Mt. Sinai Hospital, Minneapolis on August 25, 26 and 27, 1960. This seminar was sponsored by the Department of Dentistry of Mt. Sinai Hospital with the cooperation of Medical staff and the Hospital Dental Service Committee of the Minnesota State Dental Ass'n.

Very fine reporting, Ned. Keep up the good work!

Montana

Fred R. Schwinn writes that news is scarce in Montana at this time of year. The members of the Unit are concerned about the long winter ahead and are busy trying to get antelope, deer, elk and grouse to help fill the "old food lockers."

Happy hunting—hope the food lockers bulge!

Nebraska

Don Stormberg reports the Nebraska Unit presented its Annual Fall clinic lecture in Beatrice, Nebraska on November 6 and 7, 1960. Speakers were Jack E. Wells of the University of Kansas City, Sam Weinstein and Bill Kramer, University of Nebraska and Darrel Moreland from Creighton University. The Sunday afternoon session on November 6 was devoted to table clinics given by members of the Nebraska Unit.

New York

Ovid Slavin reports that the New York State Association of Supervising Dentists for Schools was formed in April with the following officers being elected:

President	Hugh Keenan, Corning
President-Elect	Charles Beck, Tarrytown
Vice-President	E. D. Evans, Hamburg
Sec.-Treas.	A. A. Malfitano, Syracuse

The mid-year meeting was held in Utica on Sept. 17 and 18, 1960 and was very successful. The next annual meeting will be in the home grounds of the Long Island Section at the Island Inn on April 21, 22, 23, 1961.

It is interesting to hear that a Workshop in Nutrition and Preventive Dentistry was held at the Eastman Dental Dispensary on October 7, 1960. This Workshop was for teachers of Preventive Dentistry and Nutrition in the Dental schools, the conclusions of which will be compiled and made generally available at a later date.

New Mexico

From I. L. Voda comes the news that he was a delegate to the ASDC meeting in Los Angeles. Other members from the New Mexico Unit who also attended were: David F. Striffler and William Herrera, both of Santa Fe.

The last meeting was held November 9, 1960 at which time officers for 1961 were elected. Results in our next issue.

Ohio

W. C. Schweller of the Dayton section of the Ohio Unit reports they held their first meeting of the year on Sept. 20, 1960 at the Van Cleve Hotel. William Lustig presented interesting techniques on the construction of cast gold crowns. Drs. Sherriff and Williams were also guest speakers and limited their talks to the various types of mouthpieces and the advantages and disadvantages of each.

More news will be forthcoming after the meeting on November 22.

Pennsylvania

Notes of interest from Reporter Howard Tucker: Ray Werther presented a clinic on "Orthodontics" to the Western section of the Unit at Webster Hall Hotel, Pittsburgh on Nov. 13.

The State delegates meeting of the ASDC was interrupted by the appearance of three men (Album, Sorrecelli and Spangler) dressed like Quakers from head to toe, bearing greetings from the Mayor of Philadelphia and welcoming all to the National meeting in Philly in '61, on October 14-15, at the Bellevue-Stratford Hotel. (See p. 312.)

Rhode Island

Stuart Manchester sends in his first report on the happenings within his Unit. The meeting of the Rhode Island Unit was held on November 7, 1960 at Johnson's Hummocks. Happy Hour was held at 6:30 followed by dinner at 7:30. Martin T. Orne, M.D., M.A. of the Harvard University Medical School of Medicine and the Boston Mental Health Center gave a most interesting lecture on "Dentist-Patient Relationship With Emotionally Disturbed Children."

Texas

Charles W. Maxwell, from the "big" State reports that the following officers were elected in April:

President ..... Terry Downs, San Antonio
President-Elect .... S. Lamarr Crunk, Houston
Vice-President ..... E. E. Humburg, Houston
Sec.-Treas. ..... Chas. Maxwell, Fort Worth

Plans are being made for a joint meeting of the Southwestern Pedodontic Society and the Texas Society of Dentistry for Children which will be held in Dallas, the latter part of January. Drs. Al Anderson and William Humphries will be guest clinicians.

Roy Lindahl was guest speaker to the Dental Assistants and Technicians at Technical High School enroute from the National meeting to North Carolina.

Virginia

The Virginia Unit held a Pedodontic Workshop at Natural Bridge, Virginia on November 3, 4 and 5, 1960 with Dr. Wm. Kramer, University of Nebraska, Dr. Henry Wilbur, University of Louisville and Dr. Robert Senescue of the Medical College of Virginia as guest speakers. This postgraduate course was attended by over fifty dentists from various states and the District of Columbia.

Charlie Vincent reports that the third printing of the pamphlet "Your Child and Better Dental Health" is now available. Those wishing copies may write to: Dr. Chas. J. Vincent, 521 N. 11th St., Richmond 19, Virginia.

Kenneth A. Easlick Graduate Society

President Sam Stulberg sends along the following information:

"Program Chairman Roy Lindahl is completing arrangements for the 3rd biennial meeting of the K. A. Easlick Graduate Society which will be held in Ann Arbor on May 15, 16 and 17, 1961.

The principal essayists will be Dr. Harry Sicher and Dr. Joseph Muhler. Panel discussions on pertinent subjects by members will highlight the remainder of the three day program."

Members of the Society who desire further information may contact the Secretary, Dr. Laren Teutsch, 4201 Farnum St., Omaha, Nebraska.

Mark off May 15, 16 and 17, 1961 NOW!

American Academy for the Handicapped

President Max Bramer reports that the Ninth Annual meeting for the American Academy for the Handicapped will be a Postgraduate Seminar on "Office Management of the Handicapped Patient" to be held at the Conrad Hilton Hotel, Chicago, Illinois on Sunday, Feb. 5, 1961. The following clinicians will take part in the Seminar:

M. Michael Cohen, D.M.D., Tufts University, Boston Floating Hospital, Boston, Mass.
Max Sadove, M.D., Dir. of Dept. of Anesthesia, Univ. of Illinois.
Robert Kaplan, D.D.S., Pedodontist, Univ. of Penn., Camden, N. J.
Max L. Bramer, D.D.S., Dental Dir. Pogue School, Michael Reese Hospital, Chicago, Ill.

Arnold Steinberg, D.D.S., Michael Reese Hospital, Chicago.

This program is held in conjunction with the Mid-Winter meeting of the Chicago Dental Society. This Postgraduate Course is offered to all members of the dental profession. Those interested in attending may write to the Secretary, Dr. Robert Holle, 3501 Cornell Pl., Cincinnati, Ohio.

American Academy of Pedodontics

The 13th Annual meeting of the American Academy of Pedodontics was held on August 28 through August 31, 1960 at the Harvest House in Boulder, Colorado. Local Arrangements Chairman Ben Kletsky of Denver and his committee deserve a big vote of thanks for their efforts in making the meeting most enjoyable. Nothing was left undone to give the members and guests "the best."

Guest Essayist was Dr. Robert Granger of the Department of Statistics, University of Toronto. He gave an interesting essay on "Epidemiology of Malocclusion: Intercorrelation of Clinical Manifestations."

Research reports were presented by second year guests with Will Feasby and Maury Massler presiding. Members of the Academy presented reports from Study Groups with Bill Brown and Roy Lindahl presiding. They were most informative.

One of the social highlights of the meeting was the banquet honoring President and Mrs. Jos. Hartsook which was very enjoyable and pleasant . . . thanks to presiding evening chairman Bill Cody.

Officers for 1960-1961 were elected as follows:

President ..... George W. Teuscher
President-Elect ..... William E. Cody
Vice-President ..... Albert L. Anderson
Secretary-Treasurer ..... James H. Simmons

The 14th Annual meeting of the Academy will be held at Hotel Bellevue-Stratford, Philadelphia, Pa. October 10-13, 1961. Morris Kelner has been appointed General Chairman.

Seminars

Diagnosis and Treatment Planning. March 6, 7, 8, 9, 10, 1961

Orthodontics for the General Practitioner. July 10, 11, 12, 13, 14, 1961

For further information regarding the above Seminars and Courses, write to Postgraduate Office, School of Dentistry, University of Pennsylvania, 4001 Spruce St., Philadelphia 4, Pa.

Course Announcements

Address all communications concerning the following courses to Director of Dental Postgraduate Study, Northwestern University Dental School, 311 E. Chicago Ave., Chicago 11, Illinois.

Analysis and Treatment of the Stomatognathic System—For the General Practitioner. Jan. 16, 17, 18, 1961

Pedodontics. February 2, 3, 1961

Prosthetic and Orthodontic Rehabilitation for the Cleft Palate Patient. April 10, 11, 1961

The Use of Drugs in Dental Practice. May 8, 9, 10, 1961

* * *

Address all communications concerning the following courses to Dr. William R. Mann, Associate Director of the W. K. Kellogg Foundation Institute, Graduate and Postgraduate Dentistry, University of Michigan, Ann Arbor, Michigan.

Control of Apprehension and Pain in Dentistry for Children (A Course for the Family Dentist). April 17-18, 1961

Dental Treatment for Handicapped Children. March 20-21, 1961

Dentistry for Children. Feb. 13-24, 1961; May 22-June 2, 1961

Guest Essayist, Robert Granger enjoying some of the comments from the audience.

Members and guests chatting during a break.

Officers and Board of Directors of the Academy.

American Academy of Pedodontics Meeting Boulder, Colorado, 1960

Local Arrangements Committee: Left to right, Paul Barker, Bill Cody, Chairman Ben Kletsky, Bill Humphrey.

Left to right: Harold C. Wittich, Lyle S. Pettit, Phillip Suess, Arthur Wood, Tom Barber.

Officers of 1960: Left to right, President-Elect George Teuscher, President Jos. Hartsook, Vice-President Wm. Cody, Secretary-Treasurer James H. Simmons.

Corvin Stine listening to John Whitaker during lunch.

Mrs. Bill Humphrey and Mrs. Ben Kletsky at Women's Brunch.

Orthodontics for the General Practitioner. Feb. 27-March 10, 1961

Practice Administration for the Pedodontist. May 1-2, 1961

* * *

The Department of Dentistry presents for the third consecutive year a two-day course for practicing dentists on "The Medical Laboratory in Clinical Dentistry" at Michael Reese Hospital & Medical Center, Chicago, Illinois.

The course will be given on February 9-10, 1961 by Dr. Emanuel Cheraskin, M.D., D.M.D., Professor and Head of Department on Oral Medicine, University of Alabama and moderated by Dr. Arthur Elfenbaum, Professor Emeritus, University of Illinois and Northwestern University and in charge of Diagnostic Division, Department of Dentistry, Michael Reese Hospital & Medical Center. Tuition fee is $50.00. For further information re course, write directly to: Dept. of Dentistry, Michael Reese Hospital & Medical Center, Chicago 16, Ill.

First Annual Orthodontic Seminar

The Miami Orthodontic Foundation announces the First annual orthodontic seminar to be held at the Americana Hotel, Miami Beach, Florida on February 13 to 16, 1961. The program, devoted to a growth and development lecture series, is entitled "The Human Head—A Synthesis of Current Knowledge" and the panelists will be Dr. Bertram Kraus, Professor of Physical Anthropology, University of Washington, School of Dentistry; Dr. Melvin Moss, Professor of Anatomy, Columbia University, College of Physicians and Surgeons; Dr. Nicholas DiSalvo, Chairman of Dept. of Orthodontics, College of Physicians and Surgeons, Columbia University; Dr. Charles Burstone, Dept. of Orthodontics, College of Dentistry, University of Indiana.

Address all inquiries to the Miami Orthodontic Seminar, Americana Hotel, Miami Beach, Florida.

Material intended for Unit News should be sent to Tiny Konikow, 500 S. Washington Ave., Royal Oak, Michigan. Deadline dates: First Quarter, January 25; Second Quarter, April 25; Third Quarter, July 25; Fourth Quarter, October 25.

MINUTES OF THE EXECUTIVE COUNCIL MEETING—THE AMERICAN SOCIETY OF DENTISTRY FOR CHILDREN*

AMBASSADOR HOTEL, LOS ANGELES, CALIFORNIA
OCTOBER 14, 1960

The meeting was called to order by President William E. Brown at 9:00 a.m. All members of the Executive Council were present except Dr. Joel Freedman who could not attend because of illness. Eight guests were present during all or part of the session.

COMMITTEE ON CONSTITUTION AND BY-LAWS

This Committee had been asked to consider possible changes in the timing and function of the State Delegates meeting and the Annual Meeting. No decision had been reached by the Committee and the question was referred back to the Executive Council. The Executive Council asked that this question, and a number of others, be again considered by the Committee on Constitution and By-Laws. The Committee was asked to make a careful review of the Constitution and By-Laws in order to eliminate some inconsistencies and to bring them in line with current practice.

COMMITTEE ON COMMUNITY DENTAL HEALTH PROGRAMS

This Committee has planned three activities for the coming year: the dissemination of information about community dental health program activities to the ASDC membership; communication with other related dental and public health groups; and exploration of new problem areas in order to develop suggested policies for the society. Major emphasis during the coming year will be on informing the membership about the necessity for supporting the American Dental Association's efforts to obtain earmarked federal grants to improve state and community dental health programs.

EDITORIAL AND PUBLICATIONS COMMITTEE

During the past year the Commission has assisted with the revision of advertising rates for the JOURNAL and arrangements for the production (through the Executive Secretary's office) of a special issue of the JOURNAL containing the annual meeting program. The Commission will continue to assist with the abstract section of the JOURNAL and will assist the editor in any way possible.

COMMITTEE ON PROFESSIONAL RELATIONS

The Committee sponsored a display on mouth protectors at the Committee on Sports annual meeting in Dallas in November, 1959. They have also worked on a survey of pedodontic practice in hospitals. The Committee was asked to contact the American Dental Association to determine the findings of a recent hospital survey to determine what information would be available on pedodontic programs. It was also recommended that the display on mouth protectors be continued and that the Committee develop a statement of policy on the use of general anesthesia for children in private dental offices to present to the Executive Council.

COMMITTEE ON PUBLICITY AND PUBLIC RELATIONS

Dr. Jennings reported a very active year for his Committee. They have developed a draft of a mass mailing brochure to inform dentists about the advantages of mem-

* Summarized by the Secretary, who has a limited number of complete copies of the minutes. The major items and reports have been briefed and are being printed for the interest of the general membership.

bership in ASDC. The Council indicated that a Subcommittee would be appointed to continue working on the brochure and arrange for its production. The Committee had also produced an article on children's dental health to appear in the national P.T.A. magazine. They were urged to continue this activity and attempt to prepare at least one article annually on children's dental health for placement in a layman's publication. The Committee had received suggestions that a National Advisory Committee to the Local Arrangements Committee be appointed and also that a Women's Auxiliary to the ASDC be formed. Both of these proposals were referred to special committees for further study.

General Chairman, 1960 Meeting

Dr. Mode Perry, General Chairman of the Los Angeles meeting presented an interim report outlining the status of the meeting and the financial arrangements as of that day. A complete report will be made to the Executive Council after the meeting has concluded. It was apparent already that the Los Angeles meeting would be an outstanding success.

Membership Committee

Dr. Ralph McDonald reported that the Membership Committee had selected three objectives for the year: the strengthening of the student membership program; the provision of assistance to the state Units in their membership programs; and the reinstatement of delinquent members. He indicated that the activities of the Committee had been successful and that there had been a growth of members in all categories.

Committee on Schools and Dental Boards

This Committee indicated that they were continuing to work on a revision of questions and answers about pedodontic practice that were published in the 2nd Quarter, 1951 Journal of Dentistry for Children. The Council indicated that they would allot additional funds to this Committee in order to make possible a more active program. They recommend revision of selected portions of the state board questions annually and employment of professional consultants to expedite this task.

Committee on Annual Meetings

The Annual Meetings Committee has continued to work on the final editing of a guide manual to assist annual meeting chairmen in their duties. Dr. Album reported on the status of plans for the 1961 Philadelphia meeting and Dr. Lenchner reported on the 1962 meeting in Miami.

State Units Committee

The State Units Committee under the direction of President-elect James Simmons, has been very active during the past year and reported that charters would be awarded at the 1960 meeting to new Units which had been organized in Mississippi, South Dakota, Louisiana and Kansas. The Committee recommended that continuing efforts be made to form Units in the unorganized states, that the procedure manual of ASDC be revised, and that efforts be made to have members of the Executive Council visit the annual meetings of as many state Units as possible.

Special Programs Committee

Dr. Ralph McDonald reported on the activities of the Special Programs Committee. This Committee was organized to assume responsibility for all aspects of the scientific program at the annual meeting in order to relieve the general chairman of part of the load in planning an annual meeting. The Committee will serve in an advisory capacity in 1961 and will have full responsibility for the 1962 scientific program.

Special Projects Committee

The Special Projects Committee has presented a detailed report outlining procedures for utilization of a grant from the Mizzy Foundation. This grant will be used to make awards to outstanding dental students for work in pedodontics. The Committee will continue to work with Mr. and Mrs. Mizzy to develop the final details of the program.

Report of the President

Dr. William E. Brown reported that several conferences had been held with representatives of the American Association of Orthodontists and that current relationships were satisfactory. He reviewed the work of the officers and committees of the ASDC and commended their active efforts. A report was also given on the Conference on Special Areas of Dental Practice that had been called by the American Dental Association in June. Dr. Brown made six recommendations for action: that the special program committee be established as a standing committee; that members of the Executive Council submit recommendations for committee appointments prior to each annual meeting; that better communications be established between the Executive Secretary and the state Units secretaries; that funds be allocated for expenses of a representative to attend a future ADA Conference on Specialties; that the Mizzy Award Program be instituted as soon as possible; and that a final decision be made on the amount of dues increase for the Society.

Report of the Secretary-Treasurer and Executive Secretary

The Secretary-Treasurer reported on the activities of his office and noted that the Executive Secretary is assuming an increasing number of duties in relation to the routine activities of the Society. The Secretary-Treasurer is primarily concerned with preparations for the business meetings of the Society and publication of minutes. This year the Executive Secretary will assume the responsibility for corresponding with state Unit secretaries to obtain the names of delegates and will be responsible for the arrangements for the state delegates meeting. Dr. Young complimented the excellent work of Dr. Frank Tuma, the Executive Secretary. The Executive Secretary gave a detailed report on the current activities of the society and noted the healthy growth that is shown in all categories.

Committee on Prepaid Dental Care

Dr. Joel Freedman has continued to work on the assignment of developing a program for ASDC in the field of prepayment, specifically as it relates to pedodontic services. Dr. Freedman has studied existing plans in detail and will be developing recommendations for the Executive Council.

It was reported to the Council that the final papers for incorporation of the Society as a non-profit Michigan corporation were ready for signature. The contract with The Ovid Bell Press, Inc., was renewed as was the contract with Executive Secretary, C. F. Tuma. Dr. Alfred E. Seyler was re-appointed Editor for the coming year. The Executive Council adopted a policy statement on request for funds from charitable organizations and other groups. A report was presented to the Council on the possibilities of sponsoring a film on dental health to be produced by a commercial concern.

MINUTES OF THE STATE DELEGATES MEETING THE AMERICAN SOCIETY OF DENTISTRY FOR CHILDREN

AMBASSADOR HOTEL, LOS ANGELES, CALIFORNIA
OCTOBER 15, 1960

The meeting of the State Unit's Delegates was called to order by President-elect, Dr. James Simmons, at 2:00 p.m. The first order of business was the roll call of the State Unit Delegates by the Secretary. The Secretary reported that a quorum was present.

Dr. Simmons asked Dr. C. Frank Tuma, the Executive Secretary, to extend greetings to the delegates. The delegates were asked for suggestions about conduct of the meeting. It was suggested that the roll call of delegates be eliminated in order to conserve time. Dr. Simmons indicated that this would be done in the future. Dr. Mode Perry, General Chairman of the Los Angeles Meeting, told the group of the importance of returning pre-registration forms in order to help committees planning the meeting to arrange satisfactory functions. He urged all delegates to attend all of the functions.

Dr. Kopel, from Michigan, asked that information about the kinds of programs being put on by the Units be published in the JOURNAL so that the various units around the nation could obtain the benefits of the experience of others. President Brown noted that this information was contained in last year's report of the State Units Committee and would be available to those who were interested.

Dr. Mario Fusco of Los Angeles reported on the activities of the Southern California Unit. They have an attendance of about 80 to 100 members at their monthly meetings, which usually include dinner with a scientific program following. They have six meetings per year, one of the meetings being held all day. The most successful meeting of the year is one devoted entirely to table clinics.

Dr. Smith from Texas suggested that the JOURNAL could be improved by including larger numbers of abstracts taken from foreign dental Journals and state dental Journals.

Dr. Bushnell reported on some of the activities of the California Society of Dentistry for Children. One of their problems is the fact that their membership is widely scattered. They partly compensate for this by publishing a newsletter three or four times a year and include some information about clinical procedures. They also plan to hold some of their meetings outside the populated areas in conjunction with local district dental societies. They have also an annual one or two day meeting at a resort area in the northern part of the state.

Dr. Charles Sweet, Jr., noted that a number of the State Units were now publishing newsletters or journals. He suggested that the Society make an award each year to the best publication by a local Unit. It was suggested that a brief résumé of the essays to be presented in the limited attendance clinic in the registered clinics would make it easier for the members to select the clinic they wished to attend in advance. It was also suggested that it would be helpful if the essays and the table clinics were not scheduled at the same time so they did not conflict.

Dr. Lindahl, North Carolina, suggested the possibility of a national newsletter which would be distributed to all the members in the months when a JOURNAL is not published. Dr. Webber from Massachusetts suggested that articles of significant interest to other professions should be available for purchase by members of the Society so that they could mail them to pediatricians, newspapers and other community individuals.

The States Units meeting adjourned at 2:55 p.m.

MINUTES OF THE ANNUAL BUSINESS MEETING THE AMERICAN SOCIETY OF DENTISTRY FOR CHILDREN

AMBASSADOR HOTEL, LOS ANGELES, CALIFORNIA
OCTOBER 15, 1960

President William E. Brown called the Annual Business Meeting to order at 3:00 p.m. and reported on the activities of the committees and the Executive Council during his term of office. Dr. Brown noted the unusually effective work of the State Unit's Committee, under the Chairmanship of President-elect, James Simmons, which has resulted in the organization of four new Units. Representatives of the new Units in Kansas, Louisiana, Mississippi and South Dakota were called forward to accept their charters.

Dr. McDonald moved (seconded by Dr. Simmons) that: *The Minutes of the 1959 annual business meeting be accepted as published.* The motion passed.

Dr. Brown then called for reports of committees.

REPORTS OF AUDIT COMMITTEE

The Audit prepared by Mr. Edward Schroeder, Accountant has been examined by this committee and we recommend its acceptance.

REPORT OF THE SECOND CONFERENCE ON DENTAL SPECIALTIES AND SPECIALIZATION

The Second Conference on Dental Specialties and Specialization, sponsored by the Council on Dental Education of the American Dental Association was held in Chicago on September 7-8, 1960. The American Board of Pedodontics and the American Academy of Pedodontics were represented by Doctors William E. Brown and Ralph L. Ireland. Dr. Ralph E. McDonald represented the American Society of Dentistry for Children.

For several years, the Council on Dental Education has given consideration and study to the dental specialty problem. This has come about as a result of the view of the Council and some members of the profession that there is now over-segmentation, over-specialization, a splintering of the profession and the reduction of the responsibilities of the general practitioner.

It became apparent during the discussion periods that the representatives of the recognized areas of special practice, and in addition, those seeking recognition, agreed that the seven special groups remain autonomous and there should be no attempt to re-group these areas. The fact was also expressed that the present moratorium should be lifted and new areas of specialty recognized as soon as they can fulfill the requirements, as outlined by the Council.

It was quite apparent that pedodontics holds an enviable position with the Council and in its relationship with the other special areas of dental practice. I believe that other representatives will agree that there seems to be very little likelihood of pedodontics being grouped with another area of practice in the forseeable future. It is entirely possible, however, that as areas of pedodontics develop, sub-groupings may be made under the general heading of pedodontics.

REFERENCE COMMITTEE REPORT ON THE ANNUAL MEETING COMMITTEE

The committee of reference to the Annual Meetings Committee commends most highly the work accomplished by this very active committee during the year, particularly the completion of the Guide Manual and its preparation for use.

The reference committee requests that the recommendations of this committee receive favorable action.

It is further recommended that a comparison of the net income to the American Society of Dentistry for Children be made on the new method of securing ads for the Annual Meeting program issue.

Reference Committee Report On Committee on Community Dental Programs

This Committee is serving under new leadership this year. Since the previous Committee had completed the projects they had undertaken it was necessary to re-define the objectives of this group. At the June Ad-Interim Meeting of the Executive Council the new Chairman, Dr. Arthur Bushel of New York City, outlined a number of excellent projects that would be appropriate for the Committee to pursue. After consultation with the Executive Council the Committee has outlined priorities for the coming year.

The major activity of the Committee will be to continue past efforts to keep the members of ASDC informed about methods of improving community dental health programs for children. This year is the appropriate time to urge members of the Society to give full support to the Council on Legislation of the American Dental Association in efforts to obtain passage of Senate Bill 3780. This legislation would establish an earmarked federal grant to states and communities for dental health programs. Since 1949 the A.D.A. has urged that a portion of the federal grants to states for health programs be reserved specifically for dental health programs. The Bill now before Congress would make this goal a reality and would be a major factor in strengthening community dental health programs.

The second priority has been assigned to developing closer working relationships between ASDC and the Council on Dental Health of the American Dental Association. This activity cannot be fully implemented at this time since the Council is without full-time leadership.

The Committee on Community Dental Health Programs is to be complimented on the way in which they have analyzed possible activities and established priorities for action. This report does not require the establishment of new policy for the ASDC since the Society is already on record in favor of the establishment of an earmarked federal grant for dental health programs.

Reference Committee Report on The Committee on Constitution and By-Laws

We recommend that this Committee present definite recommendations for revision of the Constitution and By-Laws, incorporating: (1) changes or additions approved since November, 1957 and (2) providing for necessary changes indicated by incorporation of the Society, dues increase, changes in committee structure, procedure for selection of honorary members and scheduling of meetings as per Article IV—Section 5 of the Constitution (State Delegates Meeting).

We further recommend that this committee prepare its report for presentation at the Ad-Interim Meeting, June 1961.

Reference Committee Report On Editorial and Publication Commission

This report was informational and mentions the new revisions of advertising rates for the Journal, the arrangements set up for the promotion of the Program Journal through the office of the Executive Secretary, and the continuance of the abstract section for the Journal.

The Commission desires to assist the Editor in any way possible to continue the excellent standing of the Journal of Dentistry for Children.

No action is requested at this time, and the Reference Committee wishes to express its gratitude to the Chairman, Manuel M. Album, and the members of the Commission for the excellent record and accomplishments reported, in keeping the JOURNAL in such a highly respected position in dental journalism.

REFERENCE COMMITTEE REPORT ON MEMBERSHIP COMMITTEE

The report of the Membership Committee indicates the great amount of growth enjoyed by ASDC in the past year and presents the different facets of its program that stimulated this progress. The three main goals were: the strengthening of the Student Membership Program by approaching the pedodontic departments of dental schools with workable plans for promoting student interest in children's dentistry and ASDC; assisting state Units to increase their membership through a membership promotion at national meetings, and publicizing our excellent JOURNAL OF DENTISTRY FOR CHILDREN; a follow-up program for regaining delinquent members.

This reference committee recommends to the Membership Committee that it continue the three phase program through the dental schools for student membership, through the state Units for membership increase at the local level, and through the Executive Secretary's office to aid the local Units in reinstating delinquent members.

We further recommend that if the ASDC booth at the ADA meeting in Los Angeles is profitable in promoting children's dentistry and new ASDC members that it be added as a permanent program for ASDC. We would also like to suggest the possibility of having State Membership Committeemen service booths to promote children's dentistry and membership in ASDC at all state conventions.

This reference committee most highly commends Chairman Dr. Ralph McDonald and the members of the Membership Committee for the outstanding service they have rendered to ASDC this past year.

REFERENCE COMMITTEE REPORT ON PROFESSIONAL RELATIONS COMMITTEE

The Reference Committee is extremely pleased at the extensive job that the Chairman, Dr. Myers Thornton, and his committee members have done during the past year to revitalize the Professional Relations Committee. It is quite obvious in the Reference Committee's report that the chairman and committee members have made all the goals which they set for the past year.

In going over some of the goals and results, there are a few questions which have come to the minds of the committee and also some suggestions for possible continuation of the program.

Our committee feels that the Professional Relations Committee has done an excellent job in promoting the mouth protector clinics to the American Medical Society's Committee on Sports at the meeting which was held in Dallas in November, 1959. The use of mouth protectors for the protection of the anterior teeth and also against fractures of the mandible and maxilla has become an extremely important part of the overall sports program in junior and senior high schools throughout the country. This committee feels that the American Society of Dentistry for Children, through their Professional Relations Committee, should continue to educate the public on the use of these mouth protection devices so that more schools will be using them in the future.

The committee feels that the hospital evaluation study is a fine one, but in going over the material, the committee wondered if this had not been completed by the ADA only last year. The committee realizes that the ADA is vitally interested in keeping up the overall programs of the hospitals in order that they might be acceptable by the American Dental Association as a teaching hospital. If this survey has been conducted by the ADA, then it might be wise for our committee to contact the ADA

and use many of the answers which they have received on their survey form and then make a report to the American Society of Dentistry for Children as to their results.

Since the field of operative dentistry under general anesthesia has become a new important part of dentistry for children, it would seem logical that our organization should lay down some ground rules and suggestions to its members in using hospital facilities. It might be wise for this committee to go into the overall procedures for entering a patient in the hospital, records that must be filled out, writing orders, etc. So we feel that the hospital survey is a wise one but possibly it could be augmented and helped by using a survey which has been completed by both the ADA and also the American Hospital Association.

Under the recommendations No. 4, the committee has suggested that the display of mouth protector clinics should not be repeated because of commercialism of such a display. It seems to this committee on reference that it would be wise to continue the display, leaving out the names of the companies who are producing the mouth protector product and using only the basic material and the basic idea that mouth protection is essential in all sporting events.

Reference Committee Report On Publicity and Public Relations Committee

This committee's report consisted of seven separate items of activity:

1. An educational article about dentistry for children was prepared for publication in the National Parent Teacher Magazine that reaches 11 million homes.

This is a fine example of what ASDC can do and should continue to do to fulfill one of its functions—the dissemination of knowledge to the public. The Reference Committee hopes this work will continue.

2. The committee has maintained liaison with the American Dental Association through Mr. Perry Sandell.

3. It has continued to work on the preparation of a mass mailing brochure designed to explain the ASDC in an effort to recruit new members.

It is the recommendation of this committee that a separate committee be appointed for next year to accomplish the following: (1) to determine the need and/or the desirability of this circulation; (2) if the previous findings are in the affirmative, to continue working on the brochure and negotiate its production by a reputable commercial printer.

The Reference Committee concurs in this recommendation and urges its adoption.

4. It has studied the developing National Advisory Committee to Local Arrangements Committee for Annual Meetings. This is a difficult task of integrating the activities of several committees and will certainly require a more clear analysis than is presently available.

"It is recommended that a special committee of former Local Arrangements Committee chairmen be appointed to explore the possibility of this new national committee's activities and possible contributions to the effectiveness of our present mode of operation."

The Reference Committee concurs in this recommendation and urges its adoption.

5. This Publicity and Public Relations Committee reports the receipt of a suggestion that an ASDC Auxiliary be formed.

"It is recommended that a special committee be appointed to survey the membership regarding the feasibility of establishing an auxiliary and if their findings are in the affirmative, they be directed to augment its formation."

The Reference Committee concurs in this recommendation and urges its adoption.

6. The committee reports the receipt of a letter which it quotes as follows:

"It has been the custom of the National ASDC to hold sessions on Sunday mornings. I would like to see the hours from 10:00 a.m. to 12:00 noon free of any sched-

uled activities on Sunday morning during the National Meeting. I do not think it speaks well of the ASDC to hold scientific meetings during the hours commonly used to hold church services. Since this is a committee on public relations, perhaps the previous suggestions of mine may be worthy of consideration."

It has been directed that an appropriate response be sent to this member.

7. The committee reports that it is working on "the production of a flip chart and speakers handbook, designed specifically for Dentistry for Children." This has not been completed but progress is satisfactory at date.

The Reference Committee would like to offer high recommendations to this committee for a fine piece of work done in an effort to fulfill the aims of ASDC—"The dissemination of knowledge to the profession and the public." This is Public Relations at its best. The members of the Committee are: William Cody, Paul Starkey, Mode Perry, Charles Fain and Richard Jennings, Chairman.

Reference Committee Report on The School and Dental Boards Committee

The Schools and Dental Boards Committee has essentially completed its assignment for the year, namely that of preparing questions related to the various areas of pedodontics.

The annual report presented by the committee was informational in nature and no action was requested. The reference committee members, however, feel that the work of the Schools and Dental Boards Committee is extremely important and that recommendations should be made concerning future activities of the committee.

The Executive Council considered the immediate activities and responsibilities of the Schools and Dental Boards Committee in great detail at their meeting October 14, 1960. It was the unanimous opinion of the Council members that paid consultants be engaged to review the questions that have been submitted. The consultants will be authorized to make additions and editorial changes so that the distribution of the material, in a complete and impressive form, may be accomplished before the next annual meeting.

The work of the Schools and Dental Boards Committee must necessarily be continuous due to the rapid growth of pedodontics and as a result of extensive basic and clinical research.

A logical approach to the assignments of the committee in the future may be the exhaustive review of particular areas of pedodontics with the eventual development of material that may be of assistance to those developing teaching programs at the undergraduate, graduate and postgraduate levels, in addition to providing a service to the examining boards.

The reference committee wishes to commend Dr. Kramer and the members of his committee for the completion of an assignment requiring much time and effort.

Reference Committee Report on The State Units Committee

The State Units Committee whose members are: Erwin Beechen, Melvin Noonan, Paul Sydow, James Condon, John Tabak and James Simmons, Chairman, set as its objectives for this year "to encourage chapter formation in the several states that did not have their own Units."

Their success is measured by the four new State Societies which have been chartered here today: Mississippi, South Dakota, Louisiana and Kansas.

The Committee is commended for this result of their excellent field work; ASDC is proud to welcome these new Units and wishes them well in their activities.

The Committee has made two recommendations:

1. That liaison be continued with the several states that do not as yet have their own Unit.

2. That the procedure manual of ASDC be revised and that this procedure manual be distributed to each of the active state Units.

The Reference Committee concurs in these recommendations.

Reference Committee Report On the Report of the President

The Reference Committee on the President's report moves the acceptance of the recommendations in this report.

The Reference Committee would be neglectful in their duties if they did not express gratitude and appreciation to President Brown for his excellent report and recommendations and also for the tremendous amount of time, energy and dedication given to our organization.

Reference Committee Report On the Report of the Editor

The reference committee wishes to take this opportunity to extend a vote of gratitude and continued support to Dr. Alfred E. Seyler for the efficient management of his editorial duties during the past year.

The Committee is of the opinion that it should be called to the attention of the membership that while the costs of publishing have increased somewhat during the year the costs of our Journal have not been excessive. Also during this period the size and quality of the Journal have increased.

The Committee was pleased to note that the editor is entirely satisfied regarding the relationship with The Ovid Bell Press, Inc., and has requested a renewal of our contract with them.

Reference Committee Report On the Report of the Secretary-Treasurer

The Secretary-Treasurer has conducted the affairs of his office according to the suggestions outlined in the 1959 reference committee report. A number of duties previously performed by the Secretary have been transferred to the office of the Executive Secretary.

The duties of the Secretary continue to be burdensome and there should be continuous experimentation in an effort to bring about a better distribution of activities.

The officers and Executive Council members have had the privilege of working with a Secretary of unusual capabilities and one dedicated to ASDC. We commend him for his untiring efforts.

Report of the Budget Committee

The Constitution of the ASDC specifically indicates that the purpose of the organization is to disseminate information about dentistry for children to the profession and to the public—to serve as a public relations group to improve dental services for children. Yet, because of the lack of adequate finances the Society has been able to do very little to carry out this purpose. The costs of operation have been rising steadily, yet the dues have not been increased for many years. The only reason that the Society has been able to function at all in this period of rising costs, has been because many of the officers have been able to absorb the true cost of operation by the utilization of the facilities of the institution with which they were affiliated or because they were willing and able to pay part of the expenses connected with their official duties out of their own pocket. Commendable as this may seem, it is not a healthy way for an organization as large as ASDC to operate. The Committee, with the concurrence of the Executive Council, submits a budget which will realistically meet the cost of operation and allow the officers and committees to fulfil their function.

Reference Committee Report on the Budget

The Reference Committee on the Budget has carefully reviewed the Budget Committee report and moves its adoption.

Dr. Simmons moved (seconded by Dr. Charles Sweet, Jr.) that: *Article II, Section 1 of the By-Laws be amended to read, "Dues for active members shall be $10.00 per year payable the first day of January. Each state unit shall pay, on or before April 1, ten dollars to the Executive Secretary of this society for each active member."*

On a standing vote the motion passed by more than the required two-thirds majority.

Reports of the Liaison Committee of the American Society of Dentistry for Children and the American Academy of Pedodontics

It was recommended that Dr. Roy Lindahl be nominated as a member of the Board of Pedodontics.

Dr. Albert Anderson, Chairman of the Nominating Committee presented the following nominations: President-elect, Dr. Ralph McDonald; Vice-President, Dr. Victor Lenchner; Secretary-Treasurer, Dr. Wesley Young; Executive Council member for one year term, Dr. Richard Jennings; Executive Council members for two-year terms, Dr. Mode Perry and Dr. Irving Eichenbaum. There were no further nominations from the floor.

Dr. Addelston moved (seconded by Dr. Striffler) that: *The nominations be closed and the Secretary be instructed to cast a unanimous ballot for these nominees.*

The motion passed and the President declared these individuals elected.

Dr. Brown moved (seconded by Dr. Kennedy) that: *Dr. Raidar Sognnaes be elected to honorary membership in the ASDC.*

The motion passed.

Dr. Seyler moved (seconded by Dr. Weber) that: *Dr. C. F. Tuma be elected to office of Executive Secretary for the year 1960-61.*

The motion passed.

Dr. Brown adjourned the meeting at 5:03 p.m.

American Society of Dentistry for Children

OFFICERS—1960-61

James H. Simmons ..... *President*
Ralph E. McDonald ..... *President-Elect*
Victor Lenchner ..... *Vice-President*
Wesley D. Young ..... *Secretary-Treasurer*
Alfred E. Seyler ..... *Editor*

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William E. Brown, '62
Irving W. Eichenbaum, '62
Mode R. Perry, '62
Harold K. Addelston, '61
M. Joel Freedman, '61
Richard E. Jennings, '61

Executive Secretary—C. F. Tuma, 7701 Fitzwater Road, Cleveland 41, Ohio

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Budget

William E. Brown, *Chairman*, '65
Harold K. Addelston, '64
George Higue, '61
Lawrence R. Burdge, '62
Ralph E. McDonald, '63

Constitution and By-Laws

Albert L. Anderson, *Chairman*, '61
Harold K. Addelston, '62
William E. Brown, '63

Community Dental Programs

Arthur Bushel, *Chairman*, '64
David Webber, '61
Robert C. Read, '62
David Striffler, '63
Neil Newton, '65

Membership

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Norman Olsen, '63
William Allen, '64
Joseph Muhler, '65

Professional Relations

Myers Thornton, *Chairman*, '63
H. Curtis Hester, '61
Hugh Kopel, '64
James McKnight, '62
Robert Boller, '65

Public Relations and Publicity

Richard Jennings, *Chairman*, '64
Melvin Bellet, '65
Paul Starkey, '61
Charles Fain, '63
Frank Steiger, '62

Public Relations and Publicity
(SUBCOMMITTEE)

Richard Jennings
Frank Steiger
Charles Fain

State Units

Ralph McDonald, *Chairman*
Melvin A. Noonan, '61
Paul Sydow, '62
James Condon, '63
John Tabak, '64
Francis Bushnell, '65

Schools and Dental Boards

William S. Kramer, *Chairman*, '63
Sidney Kohn, '61
Mary Lynn Morgan, '65
David B. Law, '62
Roy Lindahl, '64

Editorial and Publications

Manuel M. Album, *Chairman*, '62

BASIL BIBBY, '61
GORDON H. ROVELSTAD, '63

Annual Meetings Committee

M. JOEL FREEDMAN, *Chairman*, '61
MODE R. PERRY, '62
MANUEL ALBUM, '63
PAUL M. WEBER, '64
H. CURTIS HESTER, '65

Program Committee
(SPECIAL PRESIDENTIAL APPOINTMENT)

JAMES ROCHE, *Co-Chairman*
ROLAND HAWES, *Co-Chairman*
MANUEL ALBUM
VICTOR LENCHNER
IRVING POSNICK

Prepaid Dental Care
(SPECIAL PRESIDENTIAL APPOINTMENT)

M. JOEL FREEDMAN, *Chairman*
DONALD PORTER
JOHN WHITTAKER
MELVIN BOWMAN

Public Relations Program Committee
(SPECIAL PRESIDENTIAL APPOINTMENT)

ALBERT L. ANDERSON, *Chairman*
HAROLD K. ADDELSTON

Committee to Investigate an Auxiliary to the American Society of Dentistry for Children
(SPECIAL PRESIDENTIAL APPOINTMENT)

PAUL WEBER, *Chairman*
HAROLD SCOTT

Committee to Investigate the National Advisory Committee
(SPECIAL PRESIDENTIAL APPOINTMENT)

PAUL WEBER, *Chairman*
M. JOEL FREEDMAN
H. MILTON COOPER
FRANCES GLENN

Committee for Liaison With the American Association of Orthodontists
(SPECIAL PRESIDENTIAL APPOINTMENT)

WILLIAM E. BROWN, *Chairman*
ALBERT L. ANDERSON
IRWIN BEECHEN

Policy and Review Committee
(SPECIAL PRESIDENTIAL APPOINTMENT)

IRVING W. EICHENBAUM, *Chairman*
GERALD E. HALKER
FRANK A. HYKE
WILLARD F. GUARD
DAVID A. SORICELLI
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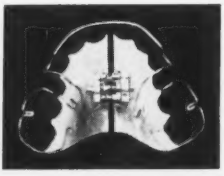
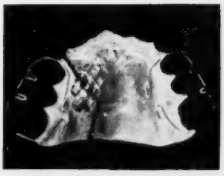


Fig. 1
Upper Lateral Expansion Appliance with Tischler Cribs and Labial Arch

Fig. 2
Upper Appliance with GLENROSS Screw to move 654/ distally



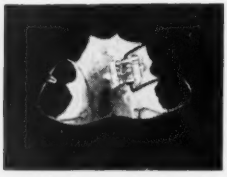


Fig. 3
Upper Appliance with GLENROSS Screw to move /34 labially

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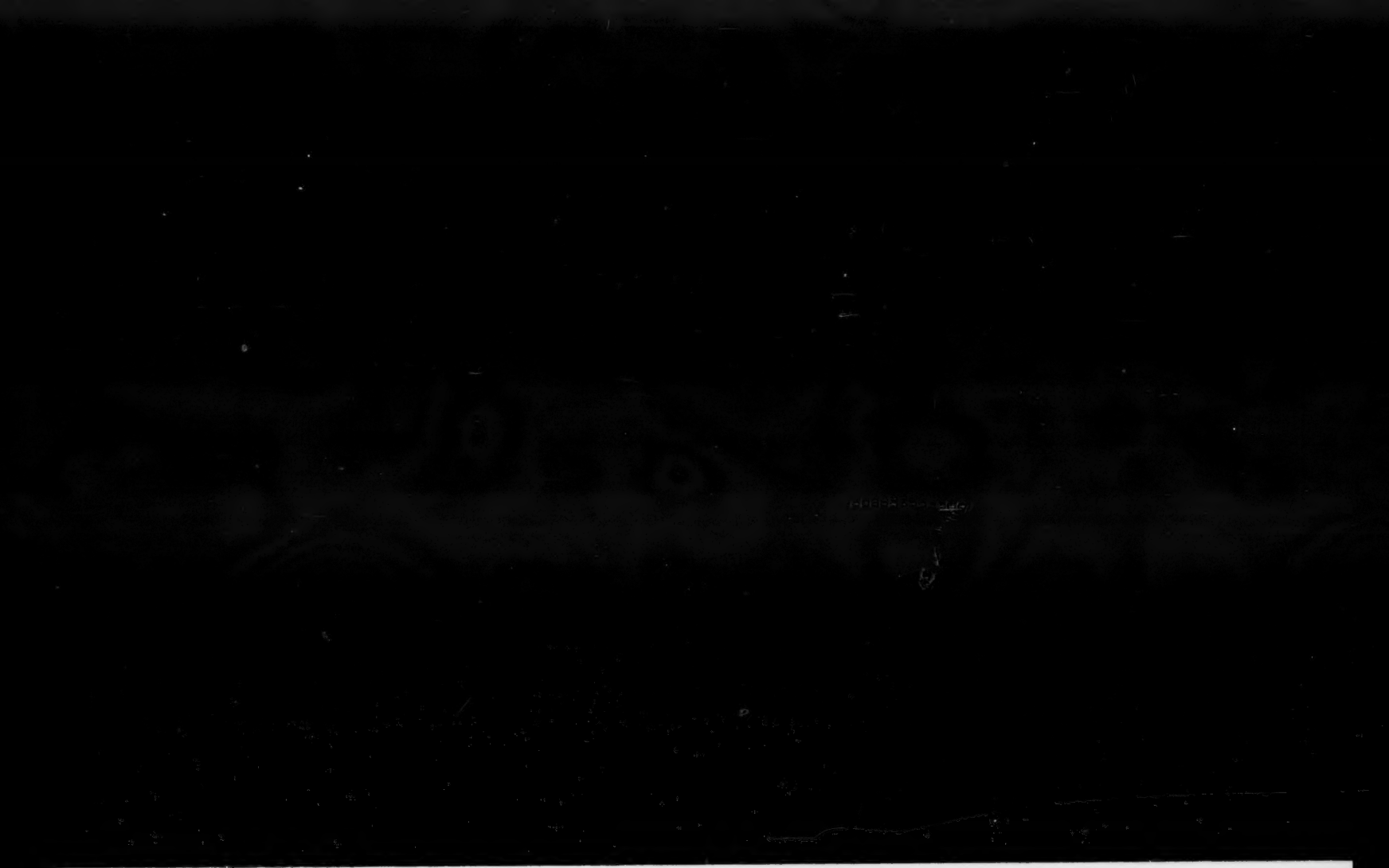
Our new brochure on acyrlics is available on request.